

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

PERSONALIZED MEDIA
COMMUNICATIONS, LLC,

Plaintiff,

v.

GOOGLE LLC,

AKAMAI TECHNOLOGIES, INC.,

NETFLIX, INC.,

Defendants.

Case No. 2:19-cv-00090-JRG
(Lead Case)

Case No. 2:19-cv-00089-JRG
(Member Case)

Case No. 2:19-cv-00091-JRG
(Member Case)

CLAIM CONSTRUCTION MEMORANDUM OPINION AND ORDER

Before the Court is the opening claim construction brief of Personalized Media Communications, LLC (“Plaintiff”) (Dkt. No. 143),¹ the response of Google LLC and Netflix, Inc. (collectively “Defendants”) (Dkt. No. 151), and Plaintiff’s reply (Dkt. No. 153). The Court held a hearing on the issues of claim construction and claim definiteness on February 27, 2020. Having considered the arguments and evidence presented by the parties at the hearing and in their briefing, the Court issues this Order.

¹ Citations to the parties’ filings are to the filing’s number in the docket (Dkt. No.) and pin cites are to the page numbers assigned through ECF.

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I. BACKGROUND

Plaintiff alleges infringement of six U.S. Patents: No. 7,747,217 (the “‘217 Patent”), No. 7,769,344 (the “‘344 Patent”), No. 7,865,920 (the “‘920 Patent”), No. 8,601,528 (the “‘528 Patent”), No. 8,739,241 (the “‘241 Patent”), and No. 9,674,560 (the “‘560 Patent”) (collectively, the “Asserted Patents”). The Asserted Patents are related in that all issued from applications that were continuations of U.S. Patent Application No. 08/113,329 filed on August 30, 1993, which issued as U.S. Patent No. 7,856,650, and claim priority through a series of continuation applications to an application filed on September 11, 1987 that issued as U.S. Patent No. 4,965,825. Each of the Asserted Patents also claims priority to U.S. Patent Application No. 06/317,510 filed on November 3, 1981, which issued as U.S. Patent No. 4,694,490 (the “‘490 Patent”), which is the continuation-in-part grandparent of U.S. Patent No. 4,965,825. The Asserted Patents share a substantially identical specification (outside the claim sets).

Various of the Asserted Patents and other patents in the family have previously been construed by this Court, other courts throughout the country, and the Patent Trial and Appeal Board / Board of Patent Appeals and Interferences. The parties cite and rely upon the following opinions:

- Special Master’s Report and Recommendation on Claim Construction, *Personalized Media Communications, LLC v. Scientific-Atlanta, Inc. et al.*, No. 1:02-cv-824-CAP, Dkt. No. 291² (N.D. Ga. Mar. 2, 2005), adopted at Dkt. No. 328 (June 6, 2005). Excerpts submitted by Plaintiff as Plaintiff’s Exs. 14 and 15 (Dkt. Nos. 143-27 and 143-28) and by Defendants as Defendants’ Ex. 46 (Dkt. No. 151-9).

This opinion is referred to herein as “*Scientific-Atlanta*.²”

² Issued under seal.

- Memorandum Opinion and Order, *Personalized Media Communications, LLC v. Motorola, Inc. et al.*, No. 2:08-cv-70-CE, Dkt. No. 271 (E.D. Tex. Sept. 30, 2011). Submitted by Plaintiff as Plaintiff's Ex. 11 (Dkt. No. 143-24) and by Defendants as Defendants' Ex. 33 (excerpts) (Dkt. No. 151-6). This opinion is referred to herein as “*Motorola*.”
- Claim Construction Memorandum and Order, *Personalized Media Communications, LLC v. Zynga, Inc.*, No. 2:12-cv-68-JRG-RSP, Dkt. No. 150 (E.D. Tex. Aug. 28, 2013). Submitted by Plaintiff as Plaintiff's Ex. 8 (Dkt. No. 143-21) and by Defendants as Defendants' Ex. 32 (excerpts) (Dkt. No. 151-5). This opinion is referred to herein as “*Zynga*.”
- Memorandum Opinion and Order, *Personalized Media Communications, LLC v. Apple, Inc. et al.*, No. 2:15-cv-01366-JRG-RSP (Lead Case), Dkt. No. 246 (E.D. Tex. Oct. 25, 2016). Submitted by Plaintiff as Plaintiff's Ex. 7 (Dkt. No. 143-20) and by Defendants as Defendants' Ex. 44 (excerpts) (Dkt. No. 151-17). This opinion is referred to herein as “*Phase 1*.”
- Memorandum Opinion and Order, *Personalized Media Communications, LLC v. Apple, Inc. et al.*, No. 2:15-cv-01366-JRG-RSP (Lead Case), Dkt. No. 247 (E.D. Tex. Oct. 25, 2016). Submitted by Plaintiff as Plaintiff's Ex. 9 (Dkt. No. 143-22) and by Defendants as Defendants' Ex. 34 (excerpts) (Dkt. No. 151-7). This opinion is referred to herein as “*Phase 2*.”
- Claim Construction Memorandum and Order, *Personalized Media Communications, LLC v. TCL Corp. et al.*, No. 2:17-cv-433-JRG, Dkt. No. 66 (E.D. Tex. June 29,

2018). Submitted by Plaintiff as Plaintiff's Ex. 13 (Dkt. No. 143-26). This opinion is referred to herein as “*TCL*.”

- Final Written Decision, *Apple Inc. v. Personalized Media Communications LLC*, IPR2016-01520 (Patent No. 8,559,635³), paper 38 (PTAB Feb. 15, 2018). Excerpts submitted by Defendants as Defendants' Ex. 50 (Dkt. No. 151-23). This opinion is referred to herein as *Apple IPR*.
- *Ex parte Harvey*, No. 2007-2115 ('217 Patent prosecution) (BPAI Jan. 13, 2009). Excerpts submitted by Defendants as Defendants' Ex. 41 (Dkt. No. 151-14).

II. LEGAL PRINCIPLES

A. Claim Construction

“It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Innova/Pure Water Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). To determine the meaning of the claims, courts start by considering the intrinsic evidence. *Id.* at 1313; *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 861 (Fed. Cir. 2004); *Bell Atl. Network Servs., Inc. v. Covad Commc'n Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). The intrinsic evidence includes the claims themselves, the specification, and the prosecution history. *Phillips*, 415 F.3d at 1314; *C.R. Bard, Inc.*, 388 F.3d at 861. The general rule—subject to certain specific exceptions discussed *infra*—is that each claim term is construed according to its ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the patent. *Phillips*, 415 F.3d

³ U.S. Patent No. 8,559,635 purports to be a continuation of U.S. Patent Application No. 08/113,329, the same application that all the Asserted Patents list as a continuation parent.

at 1312–13; *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003); *Azure Networks, LLC v. CSR PLC*, 771 F.3d 1336, 1347 (Fed. Cir. 2014) (“There is a heavy presumption that claim terms carry their accustomed meaning in the relevant community at the relevant time.”) (vacated on other grounds).

“The claim construction inquiry … begins and ends in all cases with the actual words of the claim.” *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998). “[I]n all aspects of claim construction, ‘the name of the game is the claim.’” *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1298 (Fed. Cir. 2014) (quoting *In re Hiniker Co.*, 150 F.3d 1362, 1369 (Fed. Cir. 1998)). First, a term’s context in the asserted claim can be instructive. *Phillips*, 415 F.3d at 1314. Other asserted or unasserted claims can also aid in determining the claim’s meaning, because claim terms are typically used consistently throughout the patent. *Id.* Differences among the claim terms can also assist in understanding a term’s meaning. *Id.* For example, when a dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. *Id.* at 1314–15.

“[C]laims ‘must be read in view of the specification, of which they are a part.’” *Id.* (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc)). “[T]he specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” *Id.* (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). But, “[a]lthough the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims.” *Comark Commc’ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998) (quoting *Constant v. Advanced Micro-*

Devices, Inc., 848 F.2d 1560, 1571 (Fed. Cir. 1988)); *see also Phillips*, 415 F.3d at 1323. “[I]t is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited.” *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004).

The prosecution history is another tool to supply the proper context for claim construction because, like the specification, the prosecution history provides evidence of how the U.S. Patent and Trademark Office (“PTO”) and the inventor understood the patent. *Phillips*, 415 F.3d at 1317. However, “because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes.” *Id.* at 1318; *see also Athletic Alternatives, Inc. v. Prince Mfg.*, 73 F.3d 1573, 1580 (Fed. Cir. 1996) (ambiguous prosecution history may be “unhelpful as an interpretive resource”).

Although extrinsic evidence can also be useful, it is “less significant than the intrinsic record in determining the legally operative meaning of claim language.” *Phillips*, 415 F.3d at 1317 (quoting *C.R. Bard, Inc.*, 388 F.3d at 862). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but technical dictionaries and treatises may provide definitions that are too broad or may not be indicative of how the term is used in the patent. *Id.* at 1318. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert’s conclusory, unsupported assertions as to a term’s definition are not helpful to a court. *Id.* Extrinsic evidence is “less reliable than the patent

and its prosecution history in determining how to read claim terms.” *Id.* The Supreme Court has explained the role of extrinsic evidence in claim construction:

In some cases, however, the district court will need to look beyond the patent’s intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period. *See, e.g., Seymour v. Osborne*, 11 Wall. 516, 546 (1871) (a patent may be “so interspersed with technical terms and terms of art that the testimony of scientific witnesses is indispensable to a correct understanding of its meaning”). In cases where those subsidiary facts are in dispute, courts will need to make subsidiary factual findings about that extrinsic evidence. These are the “evidentiary underpinnings” of claim construction that we discussed in *Markman*, and this subsidiary factfinding must be reviewed for clear error on appeal.

Teva Pharm. USA, Inc. v. Sandoz, Inc., 574 U.S. 318, 331–32 (2015).

B. Departing from the Ordinary Meaning of a Claim Term

There are “only two exceptions to [the] general rule” that claim terms are construed according to their plain and ordinary meaning: “1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of the claim term either in the specification or during prosecution.”⁴ *Golden Bridge Tech., Inc. v. Apple Inc.*, 758 F.3d 1362, 1365 (Fed. Cir. 2014) (quoting *Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012)); *see also GE Lighting Solutions, LLC v. AgiLight, Inc.*, 750 F.3d 1304, 1309 (Fed. Cir. 2014) (“[T]he specification and prosecution history only compel departure from the plain meaning in two instances: lexicography and disavowal.”). The standards for finding lexicography or disavowal are “exacting.” *GE Lighting Solutions*, 750 F.3d at 1309.

To act as his own lexicographer, the patentee must “clearly set forth a definition of the disputed claim term,” and “clearly express an intent to define the term.” *Id.* (quoting *Thorner*, 669

⁴ Some cases have characterized other principles of claim construction as “exceptions” to the general rule, such as the statutory requirement that a means-plus-function term is construed to cover the corresponding structure disclosed in the specification. *See, e.g., CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1367 (Fed. Cir. 2002).

F.3d at 1365); *see also Renishaw*, 158 F.3d at 1249. The patentee’s lexicography must appear “with reasonable clarity, deliberateness, and precision.” *Renishaw*, 158 F.3d at 1249.

To disavow or disclaim the full scope of a claim term, the patentee’s statements in the specification or prosecution history must amount to a “clear and unmistakable” surrender. *Cordis Corp. v. Boston Sci. Corp.*, 561 F.3d 1319, 1329 (Fed. Cir. 2009); *see also Thorner*, 669 F.3d at 1366 (“The patentee may demonstrate intent to deviate from the ordinary and accustomed meaning of a claim term by including in the specification expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.”). “Where an applicant’s statements are amenable to multiple reasonable interpretations, they cannot be deemed clear and unmistakable.” *3M Innovative Props. Co. v. Tredegar Corp.*, 725 F.3d 1315, 1326 (Fed. Cir. 2013).

C. Definiteness Under 35 U.S.C. § 112, ¶ 2 (pre-AIA) / § 112(b) (AIA)

Patent claims must particularly point out and distinctly claim the subject matter regarded as the invention. 35 U.S.C. § 112, ¶ 2. A claim, when viewed in light of the intrinsic evidence, must “inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 910 (2014). If it does not, the claim fails § 112, ¶ 2 and is therefore invalid as indefinite. *Id.* at 901. Whether a claim is indefinite is determined from the perspective of one of ordinary skill in the art as of the time the application for the patent was filed. *Id.* at 911. As it is a challenge to the validity of a patent, the failure of any claim in suit to comply with § 112 must be shown by clear and convincing evidence. *BASF Corp. v. Johnson Matthey Inc.*, 875 F.3d 1360, 1365 (Fed. Cir. 2017). “[I]ndefiniteness is a question of law and in effect part of claim construction.” *ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 517 (Fed. Cir. 2012).

When a term of degree is used in a claim, “the court must determine whether the patent provides some standard for measuring that degree.” *Biosig Instruments, Inc. v. Nautilus, Inc.*, 783

F.3d 1374, 1378 (Fed. Cir. 2015) (quotation marks omitted). Likewise, when a subjective term is used in a claim, “the court must determine whether the patent’s specification supplies some standard for measuring the scope of the [term].” *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1351 (Fed. Cir. 2005). The standard “must provide objective boundaries for those of skill in the art.” *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1371 (Fed. Cir. 2014).

D. Previous Constructions of Disputed Terms

D-1. Prior court constructions are entitled to reasoned deference.

The “importance of uniformity in the treatment of a given patent” suggests a level of deference to previous court constructions of disputed claim terms. *See Finisar Corp. v. DirecTV Grp., Inc.*, 523 F.3d 1323, 1329 (Fed. Cir. 2008) (quoting *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 390 (1996)); *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318, 329 (2015) (noting that “prior cases … sometimes will serve as persuasive authority”). While the “doctrine of *stare decisis* does not compel one district court judge to follow the decision of another … previous claim constructions in cases involving the same patent are entitled to substantial weight.” *TQP Dev., LLC v. Intuit Inc.*, No. 2:12-CV-180-WCB, 2014 U.S. Dist. LEXIS 84057, at *21–22 (E.D. Tex. June 20, 2014) (Bryson, J.).

D-2. In some instances, a party may be estopped from pursuing a claim construction different from a prior court construction under the equitable doctrine of issue preclusion.

In some instances, previous court construction of a disputed term may trigger issue preclusion and bind a party to a previous construction. *Teva*, 574 U.S. at 329 (“prior cases will sometimes be binding because of issue preclusion”) (citing *Markman*, 517 U.S. at 391). “Issue preclusion generally refers to the effect of a prior judgment in foreclosing successive litigation of an issue of fact or law actually litigated and resolved in a valid court determination essential to the prior judgment, whether or not the issue arises on the same or a different claim [for relief].” *New*

Hampshire v. Maine, 532 U.S. 742, 748–49 (2001). “Issue preclusion prohibits a party from seeking another determination of the litigated issue in the subsequent action.” *Soverain Software LLC v. Victoria's Secret Direct Brand Mgmt., LLC*, 778 F.3d 1311, 1315 (Fed. Cir. 2015) (quoting *State Farm Mut. Auto. Ins. Co. v. Logisticare Sols., LLC*, 751 F.3d 684, 689 (5th Cir. 2014)). Issue preclusion applies only if four conditions are met:

First, the issue under consideration in a subsequent action must be identical to the issue litigated in a prior action. Second, the issue must have been fully and vigorously litigated in the prior action. Third, the issue must have been necessary to support the judgment in the prior case. Fourth, there must be no special circumstance that would render preclusion inappropriate or unfair.

State Farm, 751 F.3d at 689. Ultimately, issue preclusion is an “equitable doctrine” and the “discretion vested in trial courts to determine when it should be applied is broad.” *Nations v. Sun Oil Co.*, 705 F.2d 742, 744 (5th Cir. 1983) (citing *Parklane Hosiery Co., Inc. v. Shore*, 439 U.S. 322, 331 (1979)).

III. AGREED CONSTRUCTIONS

The parties have agreed to the following constructions set forth in their Joint Claim Construction Chart Pursuant to P.R. 4-5(d) (Dkt. No. 157).

Term ⁵	Agreed Construction
“control signals for controlling the operation ... of the intermediate transmitter station”	no construction necessary
• ’241 Patent Claim 16	
“storage location[s]”	no construction necessary
• ’920 Patent Claim 7	
• ’560 Patent Claim 5	

⁵ For all term charts in this order, the claims in which the term is found are listed with the term but: (1) only the highest-level claim in each dependency chain is listed, and (2) only asserted claims identified in the parties’ Joint Claim Construction Chart Pursuant to P.R. 4-5(d) (Dkt. No. 157) are listed.

Term⁵	Agreed Construction
“storage device[s]” • ’920 Patent Claims 8, 9, 12	no construction necessary
“predetermined transmission station capacities” • ’920 Patent Claim 7	no construction necessary
“data of predetermined capacities” • ’920 Patent Claim 12	no construction necessary
“transmitting said television programming and said second signal from said intermediate transmitter station to said receiver station” • ’241 Patent Claims 22, 30	no construction necessary
preamble of ’344 Patent Claim 1	limiting
preamble of each asserted claim of the ’528 Patent	limiting

Having reviewed the intrinsic and extrinsic evidence of record, the Court hereby adopts the parties’ agreed constructions.

IV. CONSTRUCTION OF DISPUTED TERMS

A. “programming”

Disputed Term	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“programming” • ’344 Patent Claim 1 • ’920 Patent Claims 7, 12 • ’528 Patent Claims 21, 32 • ’241 Patent Claims 16, 22, 30 • ’560 Patent Claims 4, 5	[noun] everything that is transmitted electronically to entertain, instruct, or inform, including television, radio, broadcast, print, and computer programming as well as combined medium programming, at least a portion designed for multiple recipients	no additional construction necessary; “television programming” and “units of audio or video programming” construed elsewhere

Disputed Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
“programming”	[verb] providing operating instructions	
• ’560 Patent Claim 8		

Because the parties’ arguments and proposed constructions with respect to these terms are related, the Court addresses the terms together.

The Parties’ Positions

Plaintiff submits: The Court should adopt the previous constructions of this term provided in *Phase 1*, *Phase 2*, and *Zynga*, with a slight modification to the construction of “programming” when used as a verb to clarify that the operating instructions need not be in any particular sequence. Dkt. No. 143 at 5–6.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: ’217 Patent col.6 ll.32–35, col.233 ll.10–27.

Defendants respond: The term “programming” need not be construed alone as “[t]here are no disputes directed at the meaning of … ‘programming’” apart from terms directed to specific types of programming. Further, Plaintiff’s proposed constructions are potentially confusing. Dkt. No. 151 at 12.

Plaintiff replies: The term “programming” should be construed to give effect to the explicit definition provided in the Asserted Patents. Dkt. No. 153 at 2.

Analysis

The issue in dispute appears to be whether “programming” should be construed. As construction of “programming” clarifies and informs the scope of other terms in dispute, the Court construes “programming” substantially the same as it previously construed the term in *Zynga*, *Phase 1*, and *Phase 2*.

The issue of the appropriate construction of “programming” as a noun in the Asserted Patents or in patents sharing the same specification has been addressed by the Court on several occasions. For example, the Court in *Zynga* noted that the common specification provided a “broad definition” of programming. Claim Construction Memorandum and Order, *Personalized Media Communications, LLC v. Zynga, Inc.*, No. 2:12-cv-68-JRG-RSP, Dkt. No. 150 at 21–23 (E.D. Tex. Aug. 28, 2013). Specifically, the patents provide: “The term ‘programming’ refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.” *Id.*^{6,7} The Court further explained that “the programming is designed for multiple recipients” and ultimately construed “programming” as follows: “everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming, at least a portion designed for multiple recipients.” *Id.* In *Phase 1*, the Court noted that “the multiple recipient aspect of ‘programming’ was the point of distinction made in the prosecution over items that PMC contended are not programming” and adopted a substantially similar construction to the *Zynga* construction: “everything that is transmitted electronically to entertain, instruct, or inform, including television, radio, broadcast, print, and computer programming as well as combined medium programming, at least a portion designed for multiple recipients.” Memorandum Opinion and Order, *Personalized Media Communications, LLC v. Apple, Inc. et al.*, No. 2:15-cv-01366-JRG-RSP (Lead Case), Dkt. No. 246 at 34–35 (E.D. Tex.

⁶ The Court quoted U.S. Patent No. 7,860,131, which purports to be a continuation of U.S. Patent Application No. 08/113,329, the same application that all the Asserted Patents list as a continuation parent. Specifically, the Court quoted column 6, line 29–34. The identical passage is found at column 6, lines 32–35 of the ’217 Patent.

⁷ The Federal Circuit recently recognized this “broad definition” of “programming” when construing a term of a related patent. *Personalized Media Communs., LLC v. Apple Inc.*, No. 2018-1936, 2020 U.S. App. LEXIS 8017, at *10–11 (Fed. Cir. Mar. 13, 2020).

Oct. 25, 2016). Given that “programming” the noun is defined in the Asserted Patents and that the multiple-recipient nature of programming may not be readily apparent without construction, the Court reiterates the reasoning set forth in *Zynga* and *Phase 1* and construes the term substantially as set forth in *Phase 1*.

The Court also previously considered the construction of “programming” used as a verb in the patent family. In *Phase 2*, the Court considered competing constructions of “programming” when used as a verb and construed the verb-sense of the term to mean “providing a sequence of operating instructions.” Memorandum Opinion and Order, *Personalized Media Communications, LLC v. Apple, Inc. et al.*, No. 2:15-cv-01366-JRG-RSP (Lead Case), Dkt. No. 247 at 17–18 (E.D. Tex. Oct. 25, 2016).⁸ Notably, the issue before the Court in *Phase 2* was not whether “programming” as a verb necessarily entailed provision of instructions in some particular sequence, but rather whether the verb sense encompasses signals sent to activate preexisting instructions (it does not). *Id.* at 14–18. The Court considered submitted prosecution-history statements regarding “programming” as a verb that suggest the plain meaning encompasses providing a sequence of operating instructions, but did not address whether this means this must be a particular sequence. *Id.* Indeed, these statements do not suggest a particular sequence, but instead establish that “programming” as a verb is used in the patents according to its customary meaning. *Id.* Further, the extrinsic evidence of record here suggests that under its customary meaning programming does not necessarily have a particular sequence or order and, e.g., encompasses simply “provid[ing] (a computer) with a set of instructions for solving a problem.” *American Heritage Dictionary* at 989

⁸ The Court construed “programming” the verb in three patents in the family of the Asserted Patents. Specifically, the Court construed U.S. Patents No. 7,752,649, No. 7,752,650, and No. 7,856,649. *Phase 2* at 3, 14. Each of these patents issued purports to be a continuation of U.S. Patent Application No. 08/113,329, the same application that all the Asserted Patents list as a continuation parent.

(2d college ed. 1982), Dkt. No. 151-4 at 4. Indeed, the Court does not interpret *Phase 2* as requiring or even suggesting any particular sequence of instructions. Finally, while objecting to Plaintiff's proposed construction, Defendants have not suggested that "programming" when used as a verb in the Asserted Patents requires a particular sequence of instructions. The Court reiterates the reasoning and ruling set forth in *Phase 2*, but modifies the construction to avoid any confusion that the instructions must be in a particular sequence—"programming" the verb encompasses provision of any sequence or set of operating instructions (but not information or signals sent "to activate preprogramming of the processor"). *See Phase 2* at 17–18.

Accordingly, the Court construes "programming" as follows:

- "programming," as a noun, means "everything that is transmitted electronically to entertain, instruct, or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming, at least a portion designed for multiple recipients"; and
- "programming," as a verb, means "providing operating instructions."

B. "television programming" and "television program"

Disputed Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
"television ... programming" • '344 Patent Claim 1	audio and corresponding video content of a show, movie, news, documentary, or similar programming;	video and any associated audio information transmitted in accordance with a television schedule
"television programming" • '528 Patent Claims 21, 32 • '241 Patent Claims 16, 22, 30	"programming" separately construed elsewhere	
"television program" • '217 Patent Claims 12, 18, 21		

Because the parties' arguments and proposed constructions with respect to these terms are related, the Court addresses the terms together.

The Parties' Positions

Plaintiff submits: The term “television programming” refers to “programming when it is ‘audio and corresponding video content.’” As set forth in the Asserted Patents, television programming may be broadcast conventionally or it may be prerecorded and transmitted to computers via interactive video systems and is therefore not limited to any kind of schedule. Further, in *Phase 1* and *Motorola*, the Court previously rejected that transmissions or television receivers are limited to conventional systems. Dkt. No. 143 at 6–8.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: '217 Patent col.1 ll.38–45, col.3 ll.53–56, col.5 ll.5–15, col.6 ll.32–35, col.161 ll.40–43, col.161 ll.48–52, col.167 l.59 – col.168 l.15, col.216 ll.45–61; '490 Patent col.2 ll.44–46, col.16 ll.43–45.

Defendants respond: At the relevant time period (“the 1980s”) “television programming” was necessarily scheduled. This is how the patent examiner understood the term during prosecution of the '217 Patent. This is also the relevant dictionary definition of “program.” Further, “television programming” is used in the Asserted Patents exclusively to refer to programming that is transmitted according to a schedule. The fact the scheduled programming may be recorded for delayed viewing does not change that it was “received in accordance with a television schedule in the first place.” Finally, Plaintiff's proposed construction does not distinguish television programming from “audio or video programming,” a term that is separately used in the Asserted Patents and would encompass programming that is distinguished from “television programming” in the patents, such as user-specific content. Dkt. No. 151 at 9–11.

In addition to the claims themselves, Defendants cite the following intrinsic and extrinsic evidence to support their position: **Intrinsic evidence:** '217 Patent col.1 ll.37–44, col.6 ll.30–53, col.11 ll.25–35, col.169 l.51 – col.170 l.49, col.171 ll.29–32; '490 Patent fig.5, col.11 ll.37–44, col.16 ll.32–45, col.19 ll.42–48; '217 Patent File Wrapper September 3, 2001 Office Action at 226, 351, 356 (Defendants' Ex. 30, Dkt. No. 151-3 at 4, 6, 11). **Extrinsic evidence:** *American Heritage Dictionary* at 989 (2d college ed. 1982), “program” (Defendants' Ex. 31, Dkt. No. 151-4 at 4).

Plaintiff replies: Even if “television programming” may be transmitted according to a schedule, the Asserted Patents do not disclaim unscheduled programming from the scope of “television programming.” Rather, the patents teach that prerecorded programming may be delivered to a station before transmission of the programming. Finally, it was known in the art that television programming could be provided on request rather than according to a fixed schedule. Dkt. No. 153 at 2–4.

Plaintiff cites further **intrinsic evidence** to support its position: '217 Patent col.168 ll.13–18; U.S. Patent No. 4,381,522 (Defendants' Ex. 75, Dkt. No. 153-2).

Analysis

The issue in dispute distills to whether “television programming” as used in the Asserted Patents necessarily refers to programming transmitted according to a “television schedule.” It does not.

While “television programming” may be transmitted according to a television schedule, the Court will not limit it to programming that is transmitted according to some schedule. For example, the patents explain in the context of cable television that:

[p]rogramming can also be manually delivered to said station on prerecorded videotapes and videodiscs. When played on video recorders, 76 and 78, or other

similar equipment well known in the art, such prerecorded programming can be transmitted via switch 75 to field distribution system, 93.

'217 Patent col.167 l.59 – col.168 l.18. This suggests that television programming can be played on video recorders and similar equipment without regard to receipt or transmission according to a transmission schedule. In other words, programming may be “television programming” without reference to a television transmission schedule.

Including Defendants’ proposed “television schedule” limitation also threatens to inject ambiguity rather than clarify claim scope. For example, the patents describe a prior-art cable-television system (set forth in *Lambert*⁹) in which transmission is scheduled according to user request, rather than some objective television schedule. *Id.* at col.3 ll.43–56; *see also, Lambert* at col.1 ll.4–9 (“The present invention relates in general to television viewing and more particularly concerns novel apparatus and techniques for enabling a viewer to conveniently select a particular program of interest and have that program scheduled for viewing shortly after selection”); (Dkt. No. 153-2 at 4). It is not clear that Defendants’ proposed “transmitted in accordance with a television schedule” encompasses the user-created, customizable transmission schedules that are clearly contemplated in the art, and discussed in the patents. Specifically, it is not clear that a program transmitted according to a schedule created in response to a user’s demand is transmitted according to a “television schedule.” This depends on the meaning of “television schedule,” which is not a claim term and appears not to be a term used in the patents.

Ultimately, transmission in accordance with a television schedule is not a defining feature of television programming. Rather, “television programming” refers to programming suitable for television and thus includes video and corresponding audio. As set forth above, all “programming” (noun) in the Asserted Patents has at least a portion designed for multiple recipients and is

⁹ U.S. Patent No. 4,381,522.

electronically transmitted. Thus, “television programming” has video and corresponding audio content, is electronically transmitted, and includes a portion designed for multiple recipients.

Accordingly, the Court construes “television programming” and “television program” as follows:

- “television programming,” “television … programming,” and “television program” means “video and any corresponding audio content, at least a portion designed for multiple recipients, that is transmitted electronically.”

C. “audio or video programming”

Disputed Term	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“audio or video programming” • ’920 Patent Claims 7, 12	audio or video content of a show, movie, news, documentary, or similar programming; “programming” separately construed elsewhere	No additional construction necessary; “units of audio or video programming” construed elsewhere.

The Parties’ Positions

Plaintiff submits: The Asserted Patents “use ‘audio or video programming’ to mean the audio or video components of television (or radio) programming.” Dkt. No. 143 at 8.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: ’217 Patent col.10 ll.49–50, col.11 ll.20–23, col.144 ll.55–60.

Defendants respond: Construction of this term is not required as there is no dispute beyond “television programming” (to which Plaintiff’s construction is tied). Further, Plaintiff improperly limits this term to exclude categories of programming in Plaintiff’s proposal for “programming.” Dkt. No. 151 at 11–12.

Analysis

The issue in dispute appears to be whether this term should be construed separately from other terms before the Court. Given the Court's separate construction of "programming," and because there is no dispute over the meanings of "audio" and "video" there is no need to construe "audio or video programming."

Accordingly, the Court determines that "audio or video programming" has its plain and ordinary meaning, subject the construction of "programming," without the need for further construction.

D. "units of programming" and "units of audio or video programming"

Disputed Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
"units of programming" <ul style="list-style-type: none">• '920 Patent Claims 7, 17• '560 Patent Claim 5	Plain and ordinary meaning; "programming" construed elsewhere.	No construction necessary. Must be the same "units" throughout the claim.
"units of audio or video programming" <ul style="list-style-type: none">• '920 Patent Claims 7, 12	No additional construction required beyond "audio or video programming."	No additional construction necessary. Must be the same "units" throughout the claim.

Because the parties' arguments and proposed constructions with respect to these terms are related, the Court addresses the terms together.

The Parties' Positions

Plaintiff submits: The Asserted Patents allow that a particular instance of programming (e.g., a movie) may be communicated in multiple units. These units "need not be treated as a static element." For example, the patents described that units comprising "television spot commercials" may be replaced by an intermediate station with different units. Dkt. No. 143 at 8–9.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: '217 Patent col.176 ll.6–40, col.178 ll.20–29, col.181 ll.45–49, col.183 ll.1–3, col.284 ll.30–38.

Defendants respond: References in the claims to “said units” or “said plurality of units” necessarily refer back to the same units that form the antecedent reference. Dkt. No. 151 at 12.

Plaintiff replies: Even though the claims recite “said units” or “said plurality of units,” the units need not be static during operation of the claims. This means, for example, that a claim step of “transmitting said plurality of units” may be performed in more than one transmission of whole or partial units, so long as all the units are eventually transmitted. Dkt. No. 153 at 4–5.

Analysis

At the hearing, the parties agreed that “said units,” and like phrases, in the claims refer to previously recited units as the antecedent reference and that there is no actual dispute over the meaning of “units of programming” or “units of audio or video programming.” Accordingly, the Court determines that these terms have their plain and ordinary meanings without the need for further construction.

E. “video” and “video image”

Disputed Term	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“video” <ul style="list-style-type: none">• '217 Patent Claims 12, 18, 20• '344 Patent Claim 1• '920 Patent Claims 7, 12• '241 Patent Claim 36	visual presentation that is capable of showing movement	no construction necessary; “create a series of discrete video images” construed elsewhere

Disputed Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
“video image[s]” • ’217 Patent Claims 20, 36	No additional construction required. A video image may include a single graphic of a visual presentation that is capable of showing movement.	No construction necessary; “create a series of discrete video images” construed elsewhere.

Because the parties’ arguments and proposed constructions with respect to these terms are related, the Court addresses the terms together.

The Parties’ Positions

Plaintiff submits: The Court in *Zynga* construed “video” as “visual presentation that is capable of showing change or movement,” held that “no additional construction of ‘video image’ is necessary,” and noted that a video image may include a single graphic. The Court should adopt these constructions but clarify that a video denotes change that constitutes movement, and not just any arbitrary change. Dkt. No. 143 at 10.

Defendants respond: The terms are understandable without construction. Further, the Asserted Patents describe video that is change other than movement, so it would be improper to limit video as Plaintiff suggests. Dkt. No. 151 at 26.

In addition to the claims themselves, Defendants cite the following **intrinsic evidence** to support their position: ’217 Patent fig.1A, col.13 l.29 – col.14 l.28.

Analysis

The issue in dispute appears to distill to whether “video” encompasses a visual presentation that shows change other than movement. It does.

The Court previously construed the terms “video” and “video image” from related patents. Specifically, the Court in *Zynga* reasoned that “not all video shows such change or movement, but

as used in the specification there is a capability of such” and construed “video” as “visual presentation that is capable of showing change or movement.” Claim Construction Memorandum and Order, *Personalized Media Communications, LLC v. Zynga, Inc.*, No. 2:12-cv-68-JRG-RSP, Dkt. No. 150 at 11–14 (E.D. Tex. Aug. 28, 2013).¹⁰ In reaching this construction, the Court referenced the graph of Figure 1A of the Asserted Patents as an example of video. Notably, “[a]t the hearing, PMC agreed to the Court’s construction” of video. *Id.* The Court reiterates the reasoning set forth *Zynga*.

The Court agrees with Defendants that the Asserted Patents disclose video that depicts change other than movement of some object. For example, the patents described the addition of a stock-performance graphic to the display via “the video RAM of the graphics card.” The graphic is added to the display and changes over time to first depict performance of the Dow Jones Industrials then to depict performance of the user’s portfolio in comparison with the Dow Jones Industrials. ’217 Patent col.13 l.29 – col.14 l.20. Thus, the patents contemplate that video may depict change that is not movement.

Accordingly, the Court determines that “video image” does not need to be construed beyond the construction of “video” and construes “video” as follows:

- “video” means “visual presentation that is capable of showing change or movement.”

¹⁰ The Court construed “video” in U.S. Patent No. 7,734,251, which patent purports to be a continuation of U.S. Patent Application No. 08/113,329, the same application that all the Asserted Patents list as a continuation parent.

F. “[programming] origination station[s],” “intermediate transmitter station,” and “intermediate transmission station”

Disputed Term	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“programming origination stations” <ul style="list-style-type: none"> • ’920 Patent Claims 7, 12 • ’560 Patent Claims 4, 5 	plain and ordinary meaning	a station that originates transmissions over-the-air from one location to many locations
“origination station” <ul style="list-style-type: none"> • ’241 Patent Claims 16, 22, 30 		
“intermediate transmitter station” <ul style="list-style-type: none"> • ’217 Patent Claim 3 • ’241 Patent Claims 16, 22, 30 	plain and ordinary meaning	a station that receives and retransmits transmissions sent over-the-air from one location to many locations
“intermediate transmission station” <ul style="list-style-type: none"> • ’920 Patent Claims 7, 12 • ’560 Patent Claims 4, 5 		

Because the parties’ arguments and proposed constructions with respect to these terms are related, the Court addresses the terms together.

The Parties’ Positions

Plaintiff submits: As used in the Asserted Patents, an “origination station” can provide programming over the air, via hard wire, and by manual means, and it can do so point-to-point. Similarly, “intermediate transmitter” and “intermediate transmission” stations may receive and transmit point-to-point and by means other than over the air (e.g., via cable). While the patents provide that “stations that receive and retransmit broadcast transmissions are called ‘intermediate transmission stations’” (quoting ’217 Patent col.21 ll.47–50), this merely states that such a broadcast station qualifies as an intermediate transmission station, not that all intermediate

transmission stations necessarily receive and retransmit broadcast transmissions. Finally, the patent provides that it “is the further purpose of this invention to provide means and methods for the automation of intermediate transmission stations that receive and retransmit programming. The programming may be delivered by any means including over-the-air, hard-wire, and manual means” (quoting *id.* at col.7 ll.10–14). Interpreting “intermediate transmission station” as specially defined to be limited to only broadcast transmissions would contradict the clear teaching of the patents. Dkt. No. 143 at 10–14.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: ’217 Patent figs.6A-6B, col.7 ll.10–14, col.10 ll.11–13, col.11 ll.35–43, col.21 ll.40–50, col.21 l.52 – col.23 l.3, col.23 ll.16–22, col.30 ll.63–67, col.43 ll.53–60, col.167 l.59 – col.168 l.5; ’490 Patent col.10 ll.26–39; U.S. Patent App. No. 08/441,701 File Wrapper Glossary of Defined Terms¹¹ at 1, 9 (Plaintiff’s Ex. 12, Dkt. No. 143-25 at 3, 11); U.S. Patent App. No. 08/449,523 File Wrapper October 17, 2000 Amendment and Request for Reconsideration under 37 C.F.R. § 1.111 at 95¹² (Plaintiff’s Ex. 21, Dkt. No. 143-34 at 5).

Defendants respond: The Asserted Patents provide the following definitions of these terms: “Hereinafter, stations that originate broadcast transmissions are called ‘original transmission stations,’ [and] stations that receive and retransmit broadcast transmissions are called ‘intermediate transmission stations’ ...” (quoting ’217 Patent col.21 ll.47–50, modification by Defendants). The term “broadcast” is also defined: “stations may transmit programming over-the-air (hereinafter,

¹¹ The Glossary provides a list of terms that “are defined and used in specific ways in U.S. Patent No. 4,965,825 and its continuations.” Dkt. No. 143-25 at 3. Each of the Asserted Patents issued from an application that claims priority to U.S. Patent No. 4,965,825 through a series of continuation applications. *See, e.g.*, ’217 Patent, at [63] Related U.S. Application Data.

¹² U.S. Patent App. No. 08/449,523 issued as U.S. Patent No. 7,856,649 and, as for each of the Asserted Patents, claims priority to U.S. Patent No. 4,965,825 through a series of continuation applications. U.S. Patent No. 7,856,649, at [63] Related U.S. Application Data.

‘broadcast’)’” (quoting *id.* at col.7 ll.14–16). This definitional language was confirmed in a glossary submitted to the USPTO during prosecution of at least 13 related patent applications. These definitions require only that the “original transmission stations” and the “intermediate transmission stations” be capable of point-to-multipoint, over-the-air transmissions, not that they be incapable of other receiving or transmitting, such as through a cable. Dkt. No. 151 at 12–16.

In addition to the claims themselves, Defendants cite the following **intrinsic evidence** to support their position: ’217 Patent fig.6, col.6 ll.48–52, col.6 ll.62–63, col.7 ll.10–16, col.11 ll.35–43, col.21 ll.47–50, col.167 l.64 – col.168 l.5; ’490 Patent, at [57] Abstract, fig.3, col.10 ll.26–39; U.S. Patent App. No. 08/477,805 File Wrapper September 22, 2000 Amendment and Request for Reconsideration under 37 C.F.R. § 1.111,¹³ Appendix D (Defendants’ Ex. 60, Dkt. No. 151-33 at 4–27).¹⁴

Plaintiff replies: The Asserted Patents described numerous embodiments of stations that have only hard-wired or point-to-point transmission capability. Dkt. No. 153 at 5–7.

Plaintiff cites further **intrinsic evidence** to support its position: ’217 Patent col.7 ll.10–16, col.21 ll.33–47, col.131 ll.62–67, col.140 ll.55–59; ’490 Patent col.10 ll.15–23.

Analysis

The issues in dispute distill to whether “origination station,” “intermediate transmitter stations,” and “intermediate transmission station” each necessarily have point-to-multipoint over-the-air transmission capability. The Court understands that “intermediate transmission station” is defined in the patents with this capability. The terms “programming origination station,”

¹³ U.S. Patent App. No. 08/447,805 issued as U.S. Patent No. 7,760,890 and, as with each of the Asserted Patents, claims priority to U.S. Patent No. 4,965,825 through a series of continuation applications. U.S. Patent No. 7,760,890, at [63] Related U.S. Application Data.

¹⁴ Defendants identify another fourteen related applications in which the Glossary was submitted to the USPTO. Defendants’ Exs. 61–74, Dkt. Nos. 151-34–151-47.

“origination station,” and “intermediate transmitter station” were not defined this way and therefore have their plain and ordinary meanings.

The term “intermediate transmission station” is defined in the Asserted Patents. Specifically, the patents provide:

Hereinafter, stations that originate broadcast transmissions are called “original transmission stations,” stations that receive and retransmit broadcast transmissions are called “intermediate transmission stations”, and stations where subscribers view programming are called “ultimate receiver stations.”

’217 Patent col.21 ll.47–52. This sets forth that “intermediate transmission stations” can “receive and retransmit broadcast transmissions.” The patents also provide:

It is the further purpose of this invention to provide means and methods for the automation of intermediate transmission stations that receive and retransmit programming. The programming may be delivered by any means including over-the-air, hard-wire, and manual means. The stations may transmit programming over-the-air (hereinafter, “broadcast”) or over hard-wire (hereinafter, “cablecast”).

Id. at col.7 ll.10–26. This sets forth that “intermediate transmission stations” can transmit via broadcast (over-the-air) or cablecast (over hard-wire). These two statements are not in tension: the “intermediate transmission station” has the capability to transmit over-the-air in either case.

While the Court perceives the language at column 21, line 47–52 of the ’217 Patent to be clearly definitional, the patentee removed any doubt about the definitional nature of this language in prosecution of related patents that share the same specification (other than the claim sets). For example, during prosecution of related U.S. Patent No. 7,760,890, Plaintiff as the patentee submitted to the Patent Office a glossary of terms defined in the specification, providing:

The following terms are defined and used in specific ways in U.S. Patent No. 4,965,825 and its continuations, including Applicants’ instant specification. ***Terms that appear at the left margin in quotation marks are formally defined in the patent disclosures.*** The meanings of terms that are shown below without quotation marks are made clear in the context in which they appear.

“broadcast” ... page 12 line 22 ... to transmit programming over-the-air.

“intermediate transmission stations”... page 40 line 33 ... (Hereinafter, ... stations that receive and retransmit broadcast transmissions are called “intermediate transmission stations”.

U.S. Patent App. No. 08/477,805 File Wrapper September 22, 2000 Amendment and Request for Reconsideration under 37 C.F.R. § 1.111, Appendix D at 1, 9 (emphasis added), Dkt. No. 151-33 at 5, 13. The terms “broadcast” and “intermediate transmission stations” appear in the left margin in quotation marks. Thus, Plaintiff represented to the Patent Office that these terms “are formally defined in the patent disclosures.” In other words, Plaintiff represented during prosecution of a related patent that the common specification of the Asserted Patents includes formal definitions of “broadcast” and “intermediate transmission station” and identified the definitional language. The Court is not persuaded by Plaintiff’s argument that rather than being definitional of “intermediate transmission station” the language identified as definitional is simply stating that a station that receives and retransmits broadcast transmissions is an intermediate transmission station without limiting the meaning of “intermediate transmission station.” Indeed, this argument contradicts Plaintiff’s representation to the Patent Office.

The Asserted Patents do not, however, include clear definitions of “origination station” or “intermediate transmitter station.” Defendants identify language ostensibly definitional of “program originating studio,” “original transmission station,” and “intermediate transmission station” and hold this language definitional of the different terms, “origination station” and “intermediate transmitter station.” Defendants offer scant evidence or argument, however, that the definitional language should be applied to different terms and rather presume the definitions apply. The law, however, demands a contrary presumption. Indeed, “[i]n the absence of any evidence to the contrary, [the Court] must presume that the use of these different terms in the claims connotes different meanings.” *CAE Screenplates, Inc. v. Heinrich Fiedler Gmbh & Co. Kg*, 224 F.3d 1308, 1317 (Fed. Cir. 2000); *see also, Chi. Bd. Options Exch., Inc. v. Int’l Sec. Exch., LLC*, 677 F.3d

1361, 1369 (Fed. Cir. 2012) (noting a “general presumption that different terms have different meanings”). Thus, the language identified by Defendants does not meet the exacting standard of lexicography for “programming origination station,” “origination station,” or “intermediate transmitter station.”

Accordingly, the Court rejects Defendants’ proposed constructions for “programming origination stations,” “origination station,” and “intermediate transmitter station” and holds those terms have their plain and ordinary meanings without the need for further construction. Further, the Court construes “intermediate transmission station” as follows:

- “intermediate transmission station” means “station that can receive and retransmit broadcast transmissions.”

G. “transmitter station”

Disputed Term	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“transmitter station” <ul style="list-style-type: none">• ’217 Patent Claims 2, 16• ’528 Patent Claim 32	plain and ordinary meaning	an origination station or an intermediate transmission station

The Parties’ Positions

Plaintiff submits: A transmitter station is not limited to an origination or intermediate transmission station. Dkt. No. 143 at 14–15.

Defendants respond: The only transmitter stations disclosed in the Asserted Patents for transmitting television or multimedia signals are origination and intermediate transmission stations. As there is no evidence of a broader meaning of “transmitter station” in the art, the term denotes an origination station or an intermediate transmission station. Dkt. No. 151 at 16.

In addition to the claims themselves, Defendants cite the following **intrinsic evidence** to support their position: ’217 Patent col.149 ll.47–67, col.230 l.58 – col.231 l.2, col.231 ll.47–53.

Plaintiff replies: The Asserted Patents include transmitter stations that do not transmit television or multimedia signals. For example, Claim 19 of the '528 Patent does not require that the recited transmitter station transmit television or multimedia images. Similarly, the “interactive video systems” described in the patents transmit television or multimedia signals and are not an origination station or an intermediate transmission station. Dkt. No. 153 at 7.

Plaintiff cites further **intrinsic evidence** to support its position: '217 Patent col.5 ll.11–14.

Analysis

The issue in dispute is whether “transmitter station” is necessarily either an “origination station” or an “intermediate transmission station.” It is not.

The Court declines to limit the claims to the disclosed embodiments identified by Defendants. To begin, the claims rather than the embodiments define the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312, 1323 (Fed. Cir. 2005) (en banc) (“although the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments”). Further, the term “transmitter” appears to be a well-used term in the art. *See, e.g.*, '217 Patent, at [56] References Cited (listing various publications with “transmitter” in the title). The term “transmitter” is used in the Asserted Patents to denote something that transmits. *See, e.g.*, *id.* at col.161 ll.48–52 (“rather than being a transmitter at a remote wireless or cable transmission station, the source of the transmission may be a local apparatus such as a video (or audio or digital information) tape recorder or a laser disc player, well known in the art”). This suggests that a transmitter station is simply a station that has or is a transmitter. Even if the only such stations disclosed in the patents are the “origination station” and the “intermediate transmission station,” this is not sufficient to limit the term to those stations. *See Toshiba Corp. v. Imation Corp.*, 681 F.3d 1358, 1369 (Fed. Cir. 2012) (“a patentee need not describe in the

specification every conceivable and possible future embodiment of his invention” (quotation marks omitted); *Rexnard Corp. v. Laitram Corp.*, 274 F.3d 1336, 1344 (Fed. Cir. 2001) (a patent “applicant is not required to describe in the specification every conceivable and possible future embodiment of his invention”).

Accordingly, the Court rejects Defendants’ proposed construction and determines that “transmitter station” has its plain and ordinary meaning without the need for further construction.

H. “automatically controlling the operation of said intermediate transmitter station”

Disputed Term	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“automatically controlling the operation of said intermediate transmitter station” • '241 Patent Claim 16	plain and ordinary meaning	controlling the operations of said intermediate transmitter station without subscriber input

The Parties’ Positions

Plaintiff submits: The Asserted Patents disclose automatic control of intermediate transmitter stations with user input. It would therefore be improper to exclude from the scope of this term automatic control that uses subscriber input. Dkt. No. 143 at 15.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: '217 Patent col.231 ll.59–67, col.285 ll.23–55; '490 Patent figs.3A–3C, col.11 ll.18–21.

Defendants respond: During prosecution of the '241 Patent, the patentee disclaimed automatic control based on subscriber input by expressly equating automatic control to control without subscriber input. Further, the Asserted Patents do not disclose any embodiment in which the intermediate transmission station is controlled by subscriber input. Dkt. No. 151 at 16–17.

In addition to the claims themselves, Defendants cite the following **intrinsic evidence** to support their position: '217 Patent col.231 ll.59–67, col.285 ll.23–55; '490 Patent col.11 ll.18–21; '241 Patent File Wrapper October 17, 2013 Amendment at 4–5, 8–9, 29–30, 39 (Defendants' Ex. 35, Dkt. No. 151-8 at 3–6, 8–9, 18).

Plaintiff replies: The prosecution-history statements do not meet the exacting standards of disclaimer. Specifically, the patentee distinguished automatic control from subscriber control in which the subscriber controlled the transmitter by entering codes. Dkt. No. 153 at 7–8.

Plaintiff cites further **intrinsic evidence** to support its position: '241 Patent File Wrapper October 17, 2013 Amendment at 29–30, 39 (Defendants' Ex. 35, Dkt. No. 151-8 at 3–6, 8–9, 18).

Analysis

The issue in dispute appears to be whether “automatically” controlling excludes controlling based on subscriber input. It does.

A plain reading of “automatically controlling” suggests controlling other than by the subscriber. Indeed, the patentee explained this during prosecution of the '241 Patent as follows: “the transmitter station disclosed in Lambert operates based on subscriber input” rather than automatically. '241 Patent File Wrapper October 17, 2013 Amendment at 39, Dkt. No. 151-8 at 18. To clarify the distinction between control based on subscriber input and automatic control, the patentee “amended the claim to recite the control signal **automatically** controlling the operation of the remote television transmitter station, i.e., without subscriber input.” *Id.* (emphasis in original). This is not a distinction between automatic control and control through subscriber-input codes, as Plaintiff suggests. Rather, this is a clear distinction between automatic control and control through subscriber input. In other words, automatic control is control “without subscriber input.”

Accordingly, the Court construes “automatically controlling the operation of said intermediate transmitter station” as follows:

- “automatically controlling the operation of said intermediate transmitter station” means “controlling the operations of said intermediate transmitter station without subscriber input.”

I. “said identified storage locations are different for each of said [plurality of] units of audio or video programming”

Disputed Term	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“said identified storage locations are different for each of said plurality of units of audio or video programming” • ’920 Patent Claim 7	Plain and ordinary meaning; “audio or video programming” construed elsewhere.	indefinite
“said identified storage locations are different for each of said units of audio or video programming” • ’920 Patent Claim 12		

Because the parties’ arguments and proposed constructions with respect to these terms are related, the Court addresses the terms together.

The Parties’ Positions

Plaintiff submits: This term clearly denotes “that the units of programming are stored in different locations that have already been identified.” This includes locations on different devices and different locations on a single device. Dkt. No. 143 at 15–16.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: ’217 Patent col.17 ll.54–60, col.170 ll.50–54, col.171 ll.32–39, col.180 ll.43–49, col.221 ll.58–62.

Defendants respond: It is not clear whether the “location” refers to the location on a storage unit, the location of the storage unit on a device, or a location like a room. Further, different data necessarily occupies different places within a storage device, so interpreting this term to encompass different locations within a storage device would render it meaningless. Finally, there is no antecedent basis for “said identified storage locations” in Claim 12. Dkt. No. 151 at 17–18.

Plaintiff replies: This term broadly encompasses locations on different devices and different locations within a device. While broad, it is not indefinite. Thus, the “locations” of Claim 12 encompass the antecedent “storage devices” in that claim. Dkt. No. 153 at 9.

Plaintiff cites further **intrinsic evidence** to support its position: ’217 Patent col.237 ll.55–60.

Analysis

The issue in dispute is whether the meanings of these terms are reasonably certain in the context of the claims and the description of the invention. In the context of Claim 7 of the ’920 Patent, the meaning is reasonably certain. In the context of Claim 12 of the patent, the meaning is not reasonably certain.

The Court agrees with Plaintiff that the term “storage locations are different” is broad enough to encompass both different locations on a single device and different devices, without being indefinite. For example, the Asserted Patents describe storing information “at a designated place in random access memory,” suggesting that information may be stored at different designated places—locations—within a device. ’217 Patent col.12 ll.33–53. The patents also disclose transferring information from processors and buffers “to external equipment such as computers, videotape recorders and players, etc.” and “to one or more internal digital recorders that receive and store in memory the recorded information,” suggesting storage locations may be in different devices. *Id.* at col.8 ll.55–63. Finally, the patents disclose systems that “can contact remote sites

and transfer stored information as required,” suggesting storage locations may be devices in different geographic locations. *Id.* at col.8 ll.63–66. While the recited “storage locations are different” is broad, this breadth does not render the meaning uncertain.

The meaning of the “said identified storage locations are different for each of said units of audio or video programming” in Claim 12, however, is not reasonably certain. As Defendants state, there is no antecedent reference to “storage location” in Claim 12. The claim recites (with emphasis added):

a first storage device that stores data of predetermined capacities; ...
a plurality of ***second storage devices*** ... for storing said units of audio or video programming; ...
a first controller that processes said data of one or more predetermined capacities to identify ***one of said plurality of second storage devices*** at which to store at least one of said units of audio or video programming ... that controls said first switch to store said at least one of said units of audio or video programming at said ***identified one of said plurality of second storage devices*** ... that controls said first switch to transfer said stored at least one of said units of audio or video programming from ***said identified one of said plurality of second storage devices*** to another of ***said plurality of storage devices***, and ...
wherein ***said identified storage locations*** are different for each of said units of audio or video programming.

There is no antecedent reference to “storage locations” or “identified storage locations” supporting “said identified storage locations” in the wherein clause. It is not clear whether “said identified storage locations” are: (1) locations within “said identified one of said plurality of second storage devices,” (2) locations within any one of “said plurality of storage devices”, or (3) any of “said plurality of storage devices.” Ultimately, the meaning of the wherein clause, and thus the meaning of the claim, is not reasonably certain.

Accordingly, the Court holds that Defendants have not established that Claim 7 is indefinite and have established that Claim 12 is indefinite.

J. “control signal”

Disputed Term	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“control signal” • ’217 Patent Claim 20 • ’528 Patent Claim 32 • ’241 Patent Claims 16, 22, 30 • ’560 Patent Claims 4, 5	a signal that controls	a signal that tells a device to perform a function, a control signal is not computer programming

The Parties’ Positions

Plaintiff submits: The Asserted Patents present the SPAM signal as an exemplary “control signal” and describe the SPAM signal as including “computer program instructions.” Dkt. No. 143 at 16–17. The Court previously recognized this nature of a control signal in *Zynga* and *Motorola*.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: ’217 Patent col.21 ll.40–41, col.22 ll.4–5.

Defendants respond: During prosecution of the ’241 and ’560 Patents, the patentee explained that a control signal of the Asserted Patents is distinct from: (1) program codes that do not tell a device to perform a function and (2) computer programming, which governs what is done by a computer as opposed to a “signal that governs when and what executes the computer programming.” These prosecution-history statements were not previously considered by the Court. Dkt. No. 151 at 18–20.

In addition to the claims themselves, Defendants cite the following **intrinsic evidence** to support their position: ’241 Patent File Wrapper September 10, 2012 Amendment at 70 (Defendants’ Ex. 36, Dkt. No. 151-9 at 5); ’560 Patent File Wrapper January 14, 2014 Amendment at 50, 66 (Defendants’ Ex. 37, Dkt. No. 151-10 at 4, 9), December 24, 2014 Appeal Brief at 67–68 (Defendants’ Ex. 38, Dkt. No. 151-11 at 6–7).

Plaintiff replies: The prosecution history statements do not support Defendants' construction. The '241 Patent prosecution statements distinguished a static "program code," not computer programming, from a control signal and allowed that a control signal may tell a device to perform a function but did not limit "control signal" to that particular signaling. The '560 Patent prosecution statements juxtaposed "control data," not "control signal," with computer programming instructions and noted a distinction between a control signal and computer programming but did not state that a control signal may not include computer programming. Dkt. No. 153 at 9.

Plaintiff cites further **intrinsic evidence** to support its position: '241 Patent File Wrapper September 10, 2012 Amendment at 70 (Defendants' Ex. 36, Dkt. No. 151-9 at 5); '560 Patent File Wrapper January 14, 2014 Amendment at 50 (Defendants' Ex. 37, Dkt. No. 151-10 at 4), December 24, 2014 Appeal Brief at 66, 68 (Defendants' Ex. 38, Dkt. No. 151-11 at 5, 7).

Analysis

There are two issues in dispute. First, whether the "control signal" necessarily tells a device to perform a function. It does not. Second, whether the "control signal" necessarily excludes computer programming. It does not.

The Court has previously construed "control signal" in the context of related patents. In *Motorola*, the Court expressly rejected that "control signal" of related patents is necessarily an embedded signal or a signal that "cause[s] a device to execute controlled functions automatically" and held the term had its plain and ordinary meaning. Memorandum Opinion and Order, *Personalized Media Communications, LLC v. Motorola, Inc. et al.*, No. 2:08-cv-70-CE, Dkt. No. 271 at 41–42 (E.D. Tex. Sept. 30, 2011).¹⁵ In *Zynga*, the Court rejected that "control signal" of

¹⁵ The Court construed "control signal" in U.S. Patents No. 5,109,414 and No. 5,335,277, which each purports to be related through continuation applications to the application that issued as U.S. Patent No. 4,965,825, which is also true for the Asserted Patents. *Motorola* at 1, 41.

related patents is necessarily an “impulse,” as opposed to a “computer program,” or a signal that “act[s] immediately” and held the term did not require construction. Claim Construction Memorandum and Order, *Personalized Media Communications, LLC v. Zynga, Inc.*, No. 2:12-cv-68-JRG-RSP, Dkt. No. 150 at 24–26 (E.D. Tex. Aug. 28, 2013).¹⁶ Neither *Motorola* nor *Zynga* addressed the prosecution history that Defendants’ rely upon here.

The “control signal” of the Asserted Patents is not limited to a signal that tells a device to perform a function. For example, Claim 16 of the ’241 Patent recites “a plurality of control signals ... for controlling the operation and identification of signals by controlling how and where to search for signals.” This suggests that a signal may qualify as a control signal by controlling “how and where” a function is performed and is not limited to one that tells a device to perform a function. Indeed, this is how the patentee characterized “control signal” during prosecution of the ’241 Patent: “the claimed invention teaches that the control signal communicates to the receiver station information such as how to operate, and how and where to look for signals.” ’241 Patent File Wrapper September 10, 2012 Amendment at 70, Dkt. No. 151-9 at 5. The applicant also stated that the prior art at issue lacks a signal that “control[s] a controllable device at a receiver station to perform a function.” *Id.*

These prosecution-history statements regarding “control signal” are not a special definition or disclaimer that mandates that a “control signal” necessarily tells a device to perform a function. Rather, the statements are consistent with a signal that simply controls “how or where” the function is performed. Indeed, the claim at issue explicitly recited “said second signal is a control signal” and “controlling said controllable device at said receiver station to perform a function in response

¹⁶ The Court construed “control signal” in U.S. Patents Nos. 7,734,251; 7,797,717; and 7,860,131, which each purports to be a continuation of U.S. Patent Application No. 08/113,329, the same application that all the Asserted Patents list as a continuation parent. *Zynga* at 2, 24.

to said passed first portion of said second signal.” *Id.* at 69, Dkt. No. 151-9 at 4. That the claim-at-issue expressed that the control signal controlled the receiver “to perform a function” suggests that the control signal does not inherently serve that purpose. Further prosecution-history statements by the patentee suggest that the control signal may convey a wide variety of information that controls the function, without necessarily telling the device to perform the function. Specifically, the patentee noted that nothing in the prior-art reference suggests a signal that “tells the decoder ***how to operate*** or ***how and where to look for signals*** or to ***communicate other information***.” *Id.* (emphasis added).

The “control signal” does not necessarily exclude computer programming. During prosecution—in the context of a pending claim that recited both a “set of computer instructions” and a “control signal causing a computer … to execute said set of computer instructions”—the patentee argued that the “specification and the claims make a distinction between control signals and computer programming, therefore the two cannot be interpreted to be the same thing. … The execution of the computer instructions is caused by the control signal in the claim.” ’560 Patent File Wrapper January 14, 2014 Amendment at 49–50, Dkt. No. 151-10 at 3–4; *see also*, ’560 Patent File Wrapper December 24, 2014 Appeal Brief at 66 (“Control signals are distinct from computer programming as demonstrated by the fact that claim 43 recites both a control signal and distinct computer programming.”), Dkt. No. 151-11 at 5. The patentee made the point that it is improper to interpret “the control data of [the prior art] as both control signal and computer programming.” ’560 Patent File Wrapper December 24, 2014 Appeal Brief at 67 (emphasis in original), Dkt. No. 151-11 at 6.

These prosecution-history statements regarding “control signal” are not a special definition or disclaimer that mandates that a “control signal” necessarily excludes “computer programming.”

Rather, the Court understands the prosecution-history statements not to be directed to some ontological distinction between control signals and computer instructions in the abstract, but rather to a distinction between two separately recited claim elements in the claim at issue. In fact, the control code of the prior art that the patentee agreed was a “control signal” included “instructions.” *Id.* (“Cox refers to ‘the first auxiliary row 24’ and the bytes are described as having the instructions and the time-on and time-off bytes which again makes these the control data, equivalent to the control signal in the claims.”); *see also, id.* at 68 (“In Cox, the control signals are decoded and the pages are transmitted in ‘a predetermined cyclical manner’ which means there is no further computer programming instructions in the transmission that are executed.”).

Ultimately, the prosecution history does not meet the exacting standard of disclaimer or lexicography with respect to “control signal” and a “control signal” is therefore not inherently limited to a signal that “tells a device to perform a function” or to a signal that excludes “computer programming.”

Accordingly, the Court rejects Defendants’ proposed construction and determines that “control signal” has its plain and ordinary meaning without the need for further construction.

K. “identification information”

Disputed Term	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“identification information”	plain and ordinary meaning	a programming schedule
• ’241 Patent Claims 22, 30		

The Parties’ Positions

Plaintiff submits: In the Asserted Patents, identification information, such as identification signals and codes, are not necessarily programming schedules. Rather, such information is described as potentially useful for determining schedules and also for non-schedule uses, such as

determining whether a new program unit is being transmitted, identifying discrete units of programming, and computer program instruction sets. Dkt. No. 143 at 17–18.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: '217 Patent col.46 ll.26–28, col.63 ll.24–28, col.93 ll.16–27, col.130 ll.34–51, col.140 ll.30–38, col.169 ll.5–9; '490 Patent at col.11 ll.32–43.

Defendants respond: The term “identification information” is not a term of art and is therefore properly limited to that disclosed in the Asserted Patents. As the only thing in the patents that comports with “identification information” as used in the claims is the “programming schedule,” “identification information” should be construed as “programming schedule.” The disclosures that Plaintiff alleges support a broader meaning are irrelevant as they do not use the term “identification information” as set forth in the claims. Dkt. No. 151 at 20–21.

In addition to the claims themselves, Defendants cite the following **intrinsic evidence** to support their position: '217 Patent col.129 l.62 – col.130 l.51, col.140 ll.30–38, col.168 ll.47–63, col.169 ll.1–22, col.169 l.31 – col.170 l.12; '490 Patent col.11 ll.17–43.

Plaintiff replies: The term ““identification information’ appears dozens of times in the specification and frequently has nothing to do with schedules.” Dkt. No. 153 at 10.

Plaintiff cites further **intrinsic evidence** to support its position: '217 Patent col.49 ll.45–50, col.92 ll.38–44, col.98 ll.57–64, col.105 ll.39–49, col.129 ll.36–41, col.276 ll.29–37.

Analysis

The issue in dispute is whether “identification information” is necessarily a programming schedule. It is not.

The term “identification information” in the Asserted Patents is used according to the plain meaning of its constituent terms; that is, it refers to information that identifies. For example, the

patents describe certain “header-identification information” that is compared with message information to identify the type of message. *See, e.g.*, ’217 Patent col.49 ll.45–63, col.56 ll.14–30, col.65 ll.44–61. Similarly, the patents describe “particular header identification information that identifies controller … as the source of [a] transfer” of information. *Id.* at col.79 ll.1–26. The patents also describe “monitored-instruction-fulfilled-identification information” that is compared with header information to identify a signal for further processing. *Id.* at col.98 ll.57–64. In another example, the patents describe “frequency identification information” that identifies (is “associated with”) radio frequency transmission received at a decoder. *Id.* at col.135 l.65 – col.136 l.10. Ultimately, “identification information” is used in the patents to broadly denote information that identifies something. This broad, lay, meaning is the only meaning that matters. *Trs. of Columbia Univ. v. Symantec Corp.*, 811 F.3d 1359, 1363 (Fed. Cir. 2016) (“The only meaning that matters in claim construction is the meaning in the context of the patent.”).

In the claims at issue, Claims 22 and 30 of the ’241 Patent, the claims expressly limit the identifying character of the recited “identification information” in that each recites: “said identification information designating programming to be transmitted,” “comparing said first signal to said identification information,” and “transmitting said television programming … from said intermediate transmitter station to said receiver station based on said step of comparing.” The plain reading of this claim language is that “identification information” includes identifying information about the programming, it “designat[es] programming to be transmitted.”

Further, Defendants’ argument is constructed on the unfounded premise that a phrase does not have meaning to one of ordinary skill in the art outside the phrase’s technical meaning within the art, if any. This improperly limits the base comprehension of the person of ordinary skill in the art, as if the lexicon of such a person is limited to technical terms and the person’s comprehension is

void when terms with ordinary lay meanings are used in a patent. The Court rejects Defendants' suggestion that the person of skill in the art is so limited and presumes that such a person has at least an ordinary working knowledge of the English language. As such, the person of ordinary skill in the art would recognize the plain, lay, meaning of "identification information" in the Asserted Patents and would not resort to a convoluted analysis constructed to limit the claims to an exemplary embodiment.

Accordingly, the Court rejects Defendants' proposed construction and determines that "identification information" has its plain and ordinary meaning without the need for further construction.

L. "how and where to search for signals" and "controlling the operation and identification of signals by controlling how and where to search for signals"

Disputed Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
"how and where to search for signals" • '241 Patent Claim 16	the manner in which embedded signals and associated programming are located and/or accessed at an intermediate transmitter station	No additional construction necessary apart from "controlling the operation and identification of signals by controlling how and where to search for signals."
"controlling the operation and identification of signals by controlling how and where to search for signals" • '241 Patent Claim 16	Plain and ordinary meaning; "how and where to search for signals" separately construed.	controlling the frequency and mode of transmission that the intermediate transmission station searches for signals

Because the parties' arguments and proposed constructions with respect to these terms are related, the Court addresses the terms together.

The Parties' Positions

Plaintiff submits: In the Asserted Patents, a search for signals involves finding signals within a transmission and Claim 16 specifies that this is done at an intermediate station. The signals may

be at varying locations and may be accessed in a variety of ways and while the search is within a preselected frequency of interest, the control of operation and identification is not limited to controlling the frequency. Dkt. No. 143 at 18–19.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: '217 Patent col.7 l.64 – col.8 l.18; '490 Patent fig.2A, col.6 ll.36–61, col.12 ll.16–19.

Defendants respond: Plaintiff's proposed construction improperly equates "how and where" with the broader "manner," "signals" with "embedded signals and associated programming," and "search" with the broader "locate[] and/or access[]." In the Asserted Patents, the search for signals within a transmission is controlled by "controlling the frequency that decoders use to search for signals." Dkt. No. 151 at 21–22.

In addition to the claims themselves, Defendants cite the following **intrinsic evidence** to support their position: '217 Patent col.7 l.64 – col.8 l.15, col.18 ll.4–7, col.169 ll.9–15; '490 Patent col.4 ll.17–30, col.7 ll.17–21, col.12 ll.12–21.

Plaintiff replies: The Asserted Patents allow that programming may be delivered by "any means" and describe that controlling the search for signals within a transmission is not limited to "controlling the frequency and mode of transmission." Dkt. No. 153 at 10.

Plaintiff cites further **intrinsic evidence** to support its position: '217 Patent col.7 ll.12–14.

Analysis

There appears to be four issues in dispute. First, whether the "signals" are necessarily embedded. They are not. Second, whether "how and where" should be construed as "manner." It should not. Third, whether "search" means "locate and/or access." It does not. Finally, whether "controlling the how and where to search for signals" means "controlling the frequency and mode of [the] transmission" that is searched. It does not.

The Court rejects Plaintiff's proposed construction. First, the "signal" in the claims is not expressed as "embedded" in a transmission and Plaintiff has not established by the requisite exacting standard that "embedded" should be read into the claims. Second, there is no reason to rewrite "how and where" as "manner" or to rewrite "search" as "locate and/or access." Indeed, both of these proposals state a broader meaning than the plain meaning of the issued claim language. Finally, there is no need to include "at an intermediate transmitter station" in the construction when the claim already expresses "controlling the operation and identification of signals by controlling how and where to search for signals at the intermediate transmitter station and automatically controlling the operation of said intermediate transmitter station." Again, Plaintiff's proposal threatens to improperly broaden or confuse claim scope. Specifically, is "an intermediate transmitter station" in the proposed construction the same as "the intermediate transmitter station" in the claims?

The Court also rejects Defendants' proposed construction. The Asserted Patents describe the SPAM signal as an exemplary searched-for signal. For example, the patents provide: "Computer, 73, has means to communicate control information with each decoder, 77, 79, 80, 84, and 88, to instruct each how to operate and **how and where to search for SPAM information.**" '217 Patent col.169 ll.23–28 (emphasis added). In other words, the decoders (not transmitters) are instructed how and where to search for signals. "SPAM signals control and coordinate a wide variety of subscriber stations." *Id.* at col.21 ll.40–41. "SPAM signals are generated at original transmission stations or intermediate transmission stations and embedded in television or radio or other programming transmissions by conventional generating and embedding means, well known in the art." *Id.* at col.43 ll.53–57. "SPAM signals can be embedded in many different locations in electronic transmissions." *Id.* at col.44 ll.1–2. With reference to Figure 2A, the patents describe

searching various portions of the transmission to extract an embedded signal, like SPAM. For example, the decoder “is designed to act on the particular frequency ranges in which embedded signal information may be found.” *Id.* at col.18 ll.49–52. The signal may be in the video portion of a television transmission. *Id.* at col.18 ll.52–54. The signal may also be in the audio portion of the transmission. *Id.* at col.18 ll.64–66. The signal may also be in some “other information portion” of the transmission. *Id.* at col.19 ll.7–10. As stated above, the “decoders” are instructed how and where to search for this signal. *Id.* at col.169 ll.23–28. In this embodiment, then, the instruction on “how and where to search for signals” would include instructing the decoder regarding the frequency ranges in which the signal may be found, and whether the signal is in the video portion, the audio portion, some other information portion. Controlling the “how and where to search” is not necessarily “controlling the frequency and mode of transmission” of the signal. Further, Defendants’ proposed construction threatens to conflate a carrier transmission (e.g., television transmission) with the searched-for signal.

Accordingly, the Court rejects both Plaintiff’s and Defendants’ proposed constructions and determines that this term has its plain and ordinary meaning without the need for further construction.

M. “media” and “medium”

Disputed Term	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“media” • ’217 Patent Claims 1, 11, 16	forms of electronically transmitted programming, such as audio, video, graphics, and/or text,	a channel of communication, such as radio, television, newspaper, book, or Internet

Disputed Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
“medium” • ’217 Patent Claims 1, 11, 16, 20	television programming (including its video and audio components) is a single form of media	alternative: • Plaintiff’s proposed construction but replace “television programming (including its video and audio components) is a single form of media” with “Internet is a single form of media”

Because the parties’ arguments and proposed constructions with respect to these terms are related, the Court addresses the terms together.

The Parties’ Positions

Plaintiff submits: The Court should construe these terms as it did in *TCL* and *Phase 2*. In fact, the Court in *Phase 2* rejected a construction substantially identical to the one Defendants’ propose here. The prior constructions comport with the disclosure of the Asserted Patents, which explains that a medium is a form of electronically transmitted programming, and not a channel or a non-electronic form. Dkt. No. 143 at 19–20.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: ’217 Patent col.1 ll.34–37, col.201 ll.44–47.

Defendants respond: The plain meaning of “medium” at the relevant time period is a “channel of communication.” This is how the applicant, the examiner, and the Board of Patent Appeals and Interferences used the term during prosecution of the ’217 Patent. The Asserted Patents do not equate “medium” with “forms of electronically transmitted programming.” Rather, the patents recognize forms of electronically transmitted programming that are not a medium, such as data, and media that include multiple forms of electronic programming, such as television. Finally, the Court addressed a different dispute in *Phase 2*; namely, whether television is a singular medium

(as defendants there contended) or two media (as Plaintiff there contended). For the reasons that television is a singular medium set forth in *Phase 2*, Internet is also a singular medium. Dkt. No. 151 at 22–25.

In addition to the claims themselves, Defendants cite the following intrinsic and extrinsic evidence to support their position: **Intrinsic evidence:** '217 Patent col.1 ll.30–44, col.10 ll.28–31, col.44 ll.17–44, col.93 ll.44–49, col.127 ll.23–39, col.201 ll.44–47, col.240 ll.33–36; '217 Patent File Wrapper March 7, 2005 Appeal Brief at 32–33 (Defendants' Ex. 40, Dkt. No. 151-13 at 4–5), January 13, 2009 Decision on Appeal at 23 (Defendants' Ex. 41, Dkt. No. 151-14 at 4), February 25, 2010 Notice of Allowance at 2 (Defendants' Ex. 42, Dkt. No. 151-15 at 5). **Extrinsic evidence:** *Webster's New College Dictionary* at 714 (1977), “medium” (Defendants' Ex. 39, Dkt. No. 151-12 at 4).

Analysis

The issue in dispute distills to whether “medium” is strictly synonymous with “programming.” It is not.

The Court previously construed “medium” and “media” in the '217 Patent. In *Phase 2*, the Court identified the issue in dispute as whether “digital television is a single media or two media: a separate video media and a separate audio media” and addressed the issue by construing the terms as “forms of electronically transmitted programming, such as audio, video, graphics, and/or text, television programming (including its video and audio components) is a single form of media.” Memorandum Opinion and Order, *Personalized Media Communications, LLC v. Apple, Inc. et al.*, No. 2:15-cv-01366-JRG-RSP (Lead Case), Dkt. No. 247 at 18–25 (E.D. Tex. Oct. 25, 2016). Notably, the Court did not reject that a medium was a channel of communication, but rather adopted a construction to address the specific issue in dispute. *Id.* In *TCL*, the Court readdressed

the issue of whether television programing is a single form of media and also addressed whether “computer presentations” are necessarily a medium and construed the term as it did in *Phase 2*.

Claim Construction Memorandum and Order, *Personalized Media Communications, LLC v. TCL Corp. et al.*, No. 2:17-cv-433-JRG, Dkt. No. 66 at 16–19 (E.D. Tex. June 29, 2018). The Court here does not disagree with the constructions in *Phase 2* and *TCL*, but notes those constructions were directed to specific issues in dispute.

The terms “medium” and “media” are used in the Asserted Patent according to their plain meaning; namely, to denote a communication channel. This includes forms of “electronically transmitted programming,” as the Court previously construed. Further, this captures the single-medium nature of television that the Court previously expressed in its construction. Importantly, this concisely expresses the plain meaning of the terms that was argued and applied during prosecution of the ’217 Patent. To begin, the Asserted Patents note a subtle distinction between “programming” and media. For instance, the patents provide:

Ultimate receiver stations are stations where programming is displayed (or otherwise outputted) to one or more subscribers, thereby enabling said subscriber or subscribers to view (or otherwise perceive) the information content of the programming. The programming so displayed (or outputted) may be any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may be received via any electronic transmission means including wireless and cable means. The programming so displayed (or outputted) may also include computer and/or combined medium programming that is locally generated under control of SPAM message information.

’217 Patent col.201 ll.40–51. This suggests that the programming is the content and the medium is the channel by which the content is communicated (e.g., displayed) and includes such channels

as television and radio.¹⁷ Thus, the channel by which the programming is transmitted (communicated) constitutes a medium.

Plaintiff as the patentee represented to the Patent Office in prosecution of the '217 Patent that "medium" has this plain meaning. For instance, Plaintiff provided:

Given the express use of the term "content" in the specification to refer to the information viewed by a user, the logical choice for the definition of "content" in this context is "substance," "gist," "meaning" or "significance." Accordingly, "content" is properly construed to mean "substance," "gist," "meaning" or "significance" in contrast to "form" or "structure." This definition is in accord with the use of the term "content" with ***the terms "medium" and "media" which connote a channel of communications.*** Accordingly, the "content" of a medium should be interpreted to mean the substance, gist, meaning or significance of a channel of communications. The specification provides examples of determining or identifying the substance, gist, meaning or significance of a channel of communications.

'217 Patent File Wrapper March 7, 2005 Appeal Brief at 32–33 (emphasis added), Dkt. No. 151-13 at 4–5. This is how the Patent Office interpreted "medium." For instance, the Board of Patent Appeals and Interferences explained that "'medium' is defined as 'a channel of communication.' *Webster's New Collegiate Dictionary* (G.&C. Merriam Co. 1977), such as radio, television, newspaper, book, or Internet." *Ex parte Harvey*, No. 2007-2115 at 23 (BPAI Jan. 13, 2009), Dkt. No. 151-14 at 4. Similarly, the patent examiner, in allowing the patent, explained that "the prior art of record fails to teach or suggest the respective claim limitations when considered as a whole and when read in light of the following interpretations disclosed by the Board of Patent Appeals and Interferences in the 1/13/09 decision: medium — a channel of communication such as radio, television, newspaper, book or Internet." '217 Patent File Wrapper February 25, 2010 Notice of Allowance at 2, Dkt. No. 151-15 at 5.

¹⁷ See also *Personalized Media Communs., LLC v. Apple Inc.*, No. 2018-1936, 2020 U.S. App. LEXIS 8017, at *10 (Fed. Cir. Mar. 13, 2020) ("The specification's definition of 'programming' focuses on the types of audiovisual material transmitted, not the means of transmittal.").

Ultimately, “medium” and “media” are used in the Asserted Patents according to their plain meaning and that meaning was described and applied during prosecution of the ’217 Patent as a channel or channels of communication.

Accordingly, the Court construes “medium” and “media” as follows:

- “medium” means “channel of communication, such as radio, television, newspaper, book, or Internet”; and
- “media” means “channels of communication, such as radio, television, newspaper, book, or Internet”

N. “create a series of discrete video images”

Disputed Term	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“create a series of discrete video images” • ’217 Patent Claim 20	Plain and ordinary meaning; “video image” construed elsewhere.	bringing into existence a series of discrete video images and not simply selecting or retrieving a series of discrete video images from the external source

The Parties’ Positions

Plaintiff submits: The Asserted Patents describe multiple embodiments using video from an external source to create images for local display. These would be improperly excluded from the scope of the claim under Defendants’ proposed construction. Dkt. No. 143 at 20–21.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: ’217 Patent col.10 ll.65 – col.11 ll.4, col.11 ll.20–23, col.149 ll.47–51, col.253 ll.1–15, col.260 ll.10–23; ’490 Patent col.19 ll.53 – col.20 ll.1–7.

Defendants respond: The term should be construed to give effect to “create,” which means to bring into existence rather than to select or retrieve preexisting images. This is how Plaintiff explained “create” in Inter Partes Review of a related patent. This is how “creating” images is

explained in the Asserted Patents, which creating may use external video but is more than simply importing the discrete video images. Dkt. No. 151 at 25.

In addition to the claims themselves, Defendants cite the following **intrinsic evidence** to support their position: '217 Patent col.10 1.65 – col.11 1.4, col.11 ll.20–23, col.149 ll.47–51, col.253 ll.1–15, col.260 ll.10–23; '490 Patent col.19 1.53 – col.20 1.7; Patent Owner's Response at 21–22, *Amazon.com Inc. et al. v. Personalized Media Communications, LLC*, IPR2014-01534 (Patent No. 7,827,587¹⁸) (PTAB June 29, 2015) (Defendants' Ex. 43, Dkt. No. 151-16 at 10–11).

Analysis

The issue in dispute appears to be whether “create a series of discrete video images” encompasses simply selecting or retrieving a preexisting series of discrete video images. It does not, though this does not exclude using a preexisting series of discrete video images to create a series of discrete video images.

The term “create” is used in the Asserted Patents according to its plain meaning; namely to denote something more than mere copying or moving. Indeed, Plaintiff as the patentee represented such to the Patent Office in proceedings involving a related patent. Specifically, the Plaintiff noted a distinction between “generating data” and “merely retrieving or selecting data from storage” in that “generating” means to “create” or “bring into existence.” Patent Owner's Response at 21–22, *Amazon.com Inc. et al. v. Personalized Media Communications, LLC*, IPR2014-01534 (Patent No. 7,827,587) (PTAB June 29, 2015) (citing Webster's Third New International Dictionary), Dkt. No. 151-16 at 10–11. In other words, Plaintiff equated “generate” and “create” and distinguished these terms from mere copying or moving. This is not any sort of lexicography or disclaimer, it is simple

¹⁸ U.S. Patent No. 7,827,587 purports to be a continuation of U.S. Patent Application No. 08/113,329, the same application that all the Asserted Patents list as a continuation parent

recognition of the plain meaning of “create.” Plaintiff has not met the exacting standard to establish that “create” in “create a series of discrete video images” is used other than according to this plain meaning such that it would encompass simply selecting or retrieving the series from some source. The created series is new, even if constructed with images selected or retrieved from another source.

Accordingly, the Court construes this term as follows:

- “create a series of discrete video images” means “bring into existence a series of discrete video images and not simply select or retrieve the series of discrete video images.”

O. “generate information based on said second medium”

Disputed Term	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“generate information based on said second medium” • ’217 Patent Claims 11, 16	Plain and ordinary meaning; “medium” construed elsewhere.	to bring into existence information at the receiver station, as opposed to selecting or retrieving information transmitted to the receiver station, based on said second medium

The Parties’ Positions

Plaintiff submits: The Asserted Patents allow generating information by other than bringing new information into existence in response to received information. Dkt. No. 143 at 26–27.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: ’217 Patent col.12 ll.39–42, col.22 ll.54–57, col.24 ll.17–33, col.24 ll.49–56.

Defendants respond: As Plaintiff explained to the Patent Office in Inter Partes Review of a related patent, to “generate” information requires more than simply selecting or retrieving the information. Dkt. No. 151 at 25–26.

In addition to the claims themselves, Defendants cite the following **intrinsic evidence** to support their position: Patent Owner’s Response at 22, *Amazon.com Inc. et al. v. Personalized Media Communications, LLC*, IPR2014-01534 (Patent No. 7,827,587¹⁹) (PTAB June 29, 2015) (Defendants’ Ex. 43, Dkt. No. 151-16 at 11).

Analysis

The issue in dispute appears to be whether “generate information based on said second medium” encompasses simply selecting the information. It does not, though the Court understands that this does not exclude using preexisting information to generate information.

The dispute here parallels the dispute over “create a series of discrete video images” and, for the reasons given with respect to that term, the Court holds that the plain meaning of “generate” involves more than simple copying or moving. Further, Plaintiff has represented such to the Court here with respect to “generating a query.” *See* Dkt. No. 143 at 32–33 (“generate” means “to produce new data and/or specifications that are input to a program”); *Webster’s NewWorld Dictionary of Computer Terms* at 115 (1983) (defining “generate” as “to produce new data. a routine, or a program from data and/or specifications that are input to a program”), Dkt. No. 143-33 at 4. Plaintiff has not met the exacting standard to establish that “generate” in “generate information based on said second medium” is used other than according to this plain meaning such that it would encompass simply selecting or retrieving the information from some other source.

Accordingly, the Court construes this term as follows:

¹⁹ U.S. Patent No. 7,827,587 purports to be a continuation of U.S. Patent Application No. 08/113,329, the same application that all the Asserted Patents list as a continuation parent

- “generate information based on said second medium” means “bring into existence information based on said second medium and not simply select or retrieve the information.”

P. “coordinating,” “coordinate,” “coordinated,” and “combining”

Disputed Term	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“coordinating” • ’217 Patent Claim 1	Plain and ordinary meaning.	to place or arrange (elements) in proper position relative to each other automatically and without manual instructions
“coordinate” • ’217 Patent Claim 11		
“coordinated” • ’217 Patent Claim 16		
“combining” • ’217 Patent Claim 20		

Because the parties’ arguments and proposed constructions with respect to these terms are related, the Court addresses the terms together.

The Parties’ Positions

Plaintiff submits: The Asserted Patents allow that “coordinating” and “combining” may involve manual input. In fact, in *Motorola*, this Court rejected a similar position on a related patent; namely that an “instruct signal which is effective to coordinate presentation” necessarily functions automatically. Further, in *Scientific Atlanta*, the U.S. District Court for the Northern District of Georgia interpreted the plain meaning of “coordinate” in a related patent to mean “to place or arrange (elements) in proper position relative to each other” and noted that “coordinating” is broader than “combining.” Dkt. No. 143 at 21–22.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: '217 Patent col.241 l.50 — col.265 l.11; '490 Patent col.20 ll.11–68.

Defendants respond: The “sole dispute for these terms is whether coordinating or combining requires automation without manual instructions.” In the Asserted Patents, automation of the coordinating or combining a presentation is described as an important improvement over the prior art, which is disparaged for the lack of automation of these processes. In fact, all the embodiments describe automatically coordinating or combining. Dkt. No. 151 at 26–28.

In addition to the claims themselves, Defendants cite the following **intrinsic evidence** to support their position: '217 Patent col.1 ll.21–29, col.7 ll.22–27, col.13 l.29 – col.14 l.52, col.21 ll.40–42, col.47 ll.1–3, col.242 l.62 – col.243 l.2, col.244 ll.25–57; '490 Patent col.1 ll.14–23, col.2 ll.22–28, col.3 ll.51–60, col.20 ll.17–28; '490 Patent File Wrapper October 4, 1984 Amendment at 6 (Defendants’ Ex. 47, Dkt. No. 151-20 at 4), July 9, 1985 Amendment at 6 (Defendants’ Ex. 48, Dkt. No. 151-21 at 4); Patent Owner’s Response at 17–22, *Amazon.com Inc. et al. v. Personalized Media Communications, LLC*, IPR2014-01527 (Patent No. 5,887,243²⁰) (PTAB June 29, 2015) (Defendants’ Ex. 45, Dkt. No. 151-18 at 3–8).

Analysis

The issue in dispute distills to whether “coordinate” and “combine” in the Asserted Patents are necessarily done “automatically and without manual instruction.” They are not.

While the Asserted Patents disclose automating processes and emphasize the importance of automating, they do not exclude any and all manual instructions. Defendants have identified a number of examples in which coordinating or combining media proceeds automatically. They have

²⁰ U.S. Patent No. 5,887,243 purports to be a continuation of U.S. Patent Application No. 08/113,329, the same application that all the Asserted Patents list as a continuation parent.

not, however, identified anything that meets the exacting standard of lexicography or disclaimer to justify their proposed negative limitation.

There does not appear to be a real dispute over whether “coordinate” means “to place or arrange (elements) in proper position relative to each other” and Defendants have not provided any argument or evidence that “combining” is strictly synonymous with “coordinating.” Given the presumption that different terms have different meanings, and the absence of argument or evidence to the contrary here, the Court will not construe “combining” and “coordinating” as strict synonyms.

Accordingly, the Court rejects Defendants’ proposed construction and determines that these terms have their plain and ordinary meanings without the need for further construction.

Q. “coordinated presentation”

Disputed Term	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“coordinated presentation” • ’217 Patent Claim 16	organized presentation of several media related by content	No additional construction necessary beyond “coordinated.”

The Parties’ Positions

Plaintiff submits: While “coordinated” is used in the Asserted Patents according to its plain and ordinary meaning, “coordinated presentation” is specifically used to denote a presentation of media that is related by content. Dkt. No. 143 at 22–23.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: ’217 Patent col.210 1.6 – col.216 1.42, col.241 1.50 – col.265 1.11; ’490 Patent col.17 1.47 – col.18 1.8, col.18 1.9 – col.20 1.68.

Defendants respond: With the proper construction of “coordinated,” there is no need to construe “coordinated presentation”; it simply means the “presentation resulting from coordinating.” Dkt. No. 151 at 28.

In addition to the claims themselves, Defendants cite the following **intrinsic evidence** to support their position: Patent Owner’s Response at 17–22, *Amazon.com Inc. et al. v. Personalized Media Communications, LLC*, IPR2014-01527 (Patent No. 5,887,243²¹) (PTAB June 29, 2015) (Defendants’ Ex. 45, Dkt. No. 151-18 at 3–8).

Analysis

The issue in dispute appears to be whether a “coordinated presentation” is a presentation that is placed or arranged in proper position relative to each other automatically and without manual instructions. For the reasons set forth above, the Court rejects that “coordinated presentation” is necessarily made automatically and without manual instructions. For the following reasons, the Court also rejects Plaintiff’s proposed construction and instead adopts a construction that follows Plaintiff’s representations to the Patent Office in a proceeding on a related patent.

The Court rejects Plaintiff’s proposed construction because it does not properly capture the meaning in the claim. For example, the claim recites “a coordinated presentation of information included in said first medium and said generated information based on said second medium.” Plaintiff would alter this to be a presentation of media rather than of information, some of which information is in a medium and some of which is generated based on a medium (which the claims elsewhere explain is generated “based on said content of said second medium”).

²¹ U.S. Patent No. 5,887,243 purports to be a continuation of U.S. Patent Application No. 08/113,329, the same application that all the Asserted Patents list as a continuation parent.

As explained to the Patent Office by Plaintiff in a proceeding on a related patent over the claim term “to coordinate presentation of said at least a portion of said data with one of a mass medium program and a program segment presentation sequence,” “to coordinate presentation” in the Asserted Patents means “to place or arrange the presentation elements in a proper position relative to each other in time, location, fashion of playing, or manner of presentation based on a defined relationship between the content of the presentation elements.” Patent Owner’s Response at 17–22, *Amazon.com Inc. et al. v. Personalized Media Communications, LLC*, IPR2014-01527 (Patent No. 5,887,243) (PTAB June 29, 2015), Dkt. No. 151-18 at 3–8. There, Plaintiff relied upon a construction of “coordinated display” by the Board of Patent Appeals and Interferences for a related patent that provided “coordinated display” means “a display where the images used in the display are displayed dependent on a defined relationship between the content of the images.” *Id.* at 17, Dkt. No. 151-18 at 3. Plaintiff noted that the “BPAI’s reasoning holds whether the two elements are videos, audio, images, or any combination of the two components” and “the BPAI’s prior opinion focused not on the ‘image’ aspect of the claim, but rather, on **the content of the programming in relation to the second image.**” *Id.* at 18–19 (emphasis in original), Dkt. No. 151-18 at 4–5.

The “coordinated” nature of a “coordinated presentation” of elements (such as the information at issue here) is a function of the relationship between the elements. As explained by Plaintiff in the context of the common specification this entails the “presentation [of] elements in a proper position relative to each other in time, location, fashion of playing, or manner of presentation based on a defined relationship between the content of the presentation elements.” *Id.* at 19–22, Dkt. No. 151-18 at 5–8.

Accordingly, the Court construes “coordinated presentation” as follows:

- “coordinated presentation” means “presentation of elements placed or arranged in proper position relative to each other in time, location, fashion of playing, or manner of presentation based on a defined relationship between the content of the presentation elements.”

R. “outputting and displaying said multimedia presentation”

Disputed Term	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“outputting and displaying said multimedia presentation” • ’217 Patent Claims 1, 11, 16	plain and ordinary meaning	without any manual step, outputting and displaying said multimedia presentation

The Parties’ Positions

Plaintiff submits: The Asserted Patents allow for output and display of multimedia presentation that involves manual user input. While the patents distinguish prior-art approaches on the ground that they do not automatically explain certain information, the distinction is not based on the automatic output and display of a multimedia presentation. Dkt. No. 143 at 23–24.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: ’217 Patent figs. 1C, 7, col.3 ll.1–14, col.14 ll.16–19, col.24 ll.21–22, col.25 ll.44–50, col.43 ll.60–67, col.44 ll.61–62, col.47 ll.1–3, col.241 l.50 – col.265 l.11, col.253 ll.1–7; ’490 Patent col.20 ll.11–68.

Defendants respond: As explained in the Asserted Patents and during prosecution of the ’490 Patent, “automation is a basic purpose of the invention.” Dkt. No. 151 at 28–29.

In addition to the claims themselves, Defendants cite the following **intrinsic evidence** to support their position: ’217 Patent col.7 ll.22–25, col.47 ll.1–3; ’490 Patent File Wrapper October

4, 1984 Amendment at 6 (Defendants' Ex. 47, Dkt. No. 151-20 at 4), July 9, 1985 Amendment at 6 (Defendants' Ex. 48, Dkt. No. 151-21 at 4).

Analysis

The issue in dispute is whether “outputting and displaying said multimedia presentation” necessarily precludes any manual step. It does not.

While the Asserted Patents disclose automating processes and emphasize the importance of automating, they do not exclude any and all manual steps. Defendants have identified a number of examples in which outputting and displaying proceeds automatically. They have not, however, identified anything that meets the exacting standard of lexicography or disclaimer to justify their proposed negative limitation.

Accordingly, the Court rejects Defendants' proposed construction and determines that “outputting and displaying said multimedia presentation” has its plain and ordinary meaning without the need for further construction.

S. The Explaining Significance Terms

Disputed Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
“content of said medium comprising an identifier that matches said predetermined identifier explains a significance of said presentation” • '217 Patent Claim 1	plain and ordinary meaning, wherein explanation of significance is based on a relationship of the media	No additional construction required; “content” and “[explains / explaining] a significance” construed elsewhere.
“content of said first medium explains a significance of said information” • '217 Patent Claim 11		

Disputed Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
“information included in said first medium explaining a significance of said generated information” • ’217 Patent Claim 16		
“medium explaining a significance of said video image” • ’217 Patent Claim 20		
“explains a significance” • ’217 Patent Claims 1, 11	plain and ordinary meaning	indefinite alternative: • explains meaning or importance to the specific user
“explaining a significance” • ’217 Patent Claims 16, 20		

Because the parties’ arguments and proposed constructions with respect to these terms are related, the Court addresses the terms together.

The Parties’ Positions

Plaintiff submits: The Court should reject that “explains a significance” or variants render any claim indefinite, and reiterate its holding in *Phase 2*. The Asserted Patents provide sufficient context to provide reasonably certain scope to these terms and do not limit the terms to require an explanation to the specific user, but instead allow the that the explanation may be “generally applicable.” Dkt. No. 143 at 24–25.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: ’217 col.13 l.63 – col.14 l.27, col.183 ll.38–52, col.184 l.58 – col.185 l.4, col.232 l.62 – col.233 l.2.

Defendants respond: These terms render claims indefinite because the meaning of “significance” is not reasonably certain. “What one person finds significant, another may not.” If

the terms mean anything in particular, it is that the meaning or import is relative to each user and thus the terms should be construed to reflect that the significance is to the specific user. Dkt. No. 151 at 29.

In addition to the claims themselves, Defendants cite the following **intrinsic evidence** to support their position: '217 Patent col.14 ll.5–27; '217 Patent File Wrapper February 4, 2002 Amendment at 113 (Defendants' Ex. 49, Dkt. No. 151-22 at 3).

Analysis

The issue in dispute distills to whether the meaning of these terms is reasonably certain. It is. This is substantially the same issue addressed by the Court in *Phase 2*. The Court is not persuaded by Defendants' argument and evidence that the *Phase 2* ruling was incorrect. Thus, the Court reiterates the *Phase 2* ruling and reasoning and rejects Defendants' arguments that these terms render any claims indefinite. *See Memorandum Opinion and Order, Personalized Media Communications, LLC v. Apple, Inc. et al.*, No. 2:15-cv-01366-JRG-RSP (Lead Case), Dkt. No. 247 at 61–66 (E.D. Tex. Oct. 25, 2016).

Accordingly, Defendants have failed to establish that any claim is indefinite for including any of the Explaining Significance terms and holds that these terms have their plain and ordinary meaning without the need for further construction.

T. “content,” “determining content,” “identify content,” “identifies [] content,” and “identifying [...] content”

Disputed Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
“content” • '217 Patent Claims 1, 11, 16, 20	does not object to Defendants' construction	the substance or gist, in contrast to form or structure
“determining content” • '217 Patent Claim 1	Does not object to Defendants' construction but seeks clarification that	ascertaining or recognizing the content, and not simply

Disputed Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
“identifies said content” • ’217 Patent Claim 1	“determining” or “identifying” content is not limited to machine recognition of the content.	determining / identifying the type of medium
“identifies content” • ’217 Patent Claim 11		
“identify content” • ’217 Patent Claim 11		
“identifying said content” • ’217 Patent Claim 11		
“identifying, using a processor, content” • ’217 Patent Claims 16, 20		
“identifying content” • ’217 Patent Claims 16, 20		

Because the parties’ arguments and proposed constructions with respect to these terms are related, the Court addresses the terms together.

The Parties’ Positions

Plaintiff submits: It does not object to Defendants’ proposed construction, which is consistent with the Court’s construction in *Phase 2*, but the Court should clarify in the construction here that the determining or identifying of the content is not limited to machine recognition of the content. Dkt. No. 143 at 25–26.

Defendants respond: The *Phase 2* constructions are supported by the intrinsic record and Plaintiff is collaterally estopped from challenging those constructions in this proceeding, including by arguing that determining or identifying the content is not limited to machine recognition. Dkt. No. 151 at 30.

In addition to the claims themselves, Defendants cite the following **intrinsic evidence** to support their position: '217 Patent File Wrapper March 7, 2005 Appeal Brief at 32–33 (Defendants' Ex. 40, Dkt. No. 151-13 at 4–5), January 13, 2009 Decision on Appeal at 26 (Defendants' Ex. 41, Dkt. No. 151-14 at 7), February 25, 2010 Notice of Allowance at 3 (Defendants' Ex. 42, Dkt. No. 151-15 at 6)

Analysis

The only issue in dispute appears to be whether the identifying or determining is necessarily limited to machine identifying or determining. On the record before the Court, there is no basis for limiting these terms to identifying or determining by a machine. Further, the issue of whether these terms necessarily entail identifying or determining by a machine was not addressed by the Court in *Phase 2*. Ultimately, the Court takes no position on whether the claims otherwise require machine identifying or determining.

Accordingly, the Court construes these terms as follows:

- “content” means “the substance or gist, in contrast to form or structure”;
- “determining content” means “ascertaining or recognizing the content, and not simply determining the type of medium”;
- “identifies said content” means “ascertains or recognizes said content, and not simply identifies the type of medium”;
- “identifies content” means “ascertains or recognizes content, and not simply identifies the type of medium”;
- “identify content” means “ascertain or recognize content, and not simply identify the type of medium”;

- “identifying said content” means “ascertaining or recognizing said content, and not simply identifying the type of medium”;
- “identifying, using a processor, content” means “ascertaining or recognizing content, using a processor, and not simply identifying the type of medium”; and
- “identifying content” means “ascertaining or recognizing content and not simply identifying the type of medium.”

U. “digital data channel”

Disputed Term	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“digital data channel” • ’217 Patent Claims 1, 11, 16, 22	a channel that carries exclusively or predominantly digital information	broadcast or cablecast that carries digital information

The Parties’ Positions

Plaintiff submits: As explained in the Asserted Patents, a digital data channel is not limited to broadcast or cablecast transmission, but may be, e.g., transmitted by a telephone or data communication network. Dkt. No. 143 at 27.

In addition to the claims themselves, Plaintiff cites the following intrinsic and extrinsic evidence to support its position: **Intrinsic evidence:** ’217 Patent col.11 ll.25–63, col.231 ll.24–53.

Extrinsic evidence: *Dictionary of Computing* at 110 (2d ed. 1986), “digital data transmission” (Plaintiff’s Ex. 16, Dkt. No. 143-29 at 4).

Defendants respond: The Asserted Patents “teach that a digital data channel is formed by embedding digital information in a broadcast or cablecast transmission.” For example, stock prices may be embedded in a cablecast transmission in response to telephonic request. The cablecast transmission with embedded stock prices is the digital data channel, the telephone request is not. Finally, Plaintiff’s proposed “predominantly” limitation injects ambiguity as an uninformed term

of degree and contradicts that teaching of the patents which allow for digital data channels that are mostly analog, like a broadcast cooking show with a digitally embedded recipe. Dkt. No. 151 at 30–31.

In addition to the claims themselves, Defendants cite the following **intrinsic evidence** to support their position: '217 Patent col.11 ll.25–62, col.43 1.52 – col.44 1.59, col.217 ll.21–40, col.231 ll.24–53; '490 Patent col.20 ll.16–69; Final Written Decision, *Apple Inc. v. Personalized Media Communications LLC*, IPR2016-01520 (Patent No. 8,559,635²²), paper 38 at 17–18 (PTAB Feb. 15, 2018) (Defendants' Ex. 41, Dkt. No. 151-23 at 3–4).

Analysis

There are two issues in dispute. First, whether a “digital data channel” is necessarily a broadcast or cablecast. It is not. Second, whether a “digital data channel” is necessarily “predominantly” digital. It is not.

The Court rejects Plaintiff's proposed construction as there is no evidentiary support for a “digital data channel” necessarily carrying exclusively or predominantly digital information.

The Court rejects Defendants' proposed construction as there is insufficient evidentiary support for limiting a digital data channel to a broadcast or cablecast transmission. Defendants have not met the exacting standard for lexicography or disclaimer.

Accordingly, the Court construes “digital data channel” as follows:

- “digital data channel” means “channel that carries digital information.”

²² U.S. Patent No. 8,559,635 purports to be a continuation of U.S. Patent Application No. 08/113,329, the same application that all the Asserted Patents list as a continuation parent.

- V. “process only a signal of said subset of said plurality of signals that includes an identifier that matches said predetermined identifier to provide said first medium” and “processing only a signal of said plurality of signal that includes an identifier that matches said predetermined identifier to provide said first medium”

Disputed Term	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
process only a signal of said subset of said plurality of signals that includes an identifier that matches said predetermined identifier to provide said first medium • ’217 Patent Claim 11	subset of said plurality of signals means: less than or equal to another set of signals. Plain and ordinary meaning as to the rest of the term.	process less than all of the signals in the subset of said plurality of signals
processing only a signal of said plurality of signal that includes an identifier that matches said predetermined identifier to provide said first medium • ’217 Patent Claim 16, 20	plain and ordinary meaning	process less than all of the signals in the plurality of signals

Because the parties’ arguments and proposed constructions with respect to these terms are related, the Court addresses the terms together.

The Parties’ Positions

Plaintiff submits: In *Phase 2*, the Court rejected Plaintiff’s proposed construction of “subset of a plurality of signals” as “portion of a larger set of signals” noting that Plaintiff’s own construction cuts against its argument that a subset of signals could be equal to the set of all signals. Here, Plaintiff proposes “less than or equal to” and submits extrinsic evidence not before the Court in *Phase 2* that a subset may comprise the entire set of signals. Dkt. No. 143 at 27–28.

In addition to the claims themselves, Plaintiff cites the following **extrinsic evidence** to support its position: *Webster’s New Collegiate Dictionary* at 1152 (1981) “subset” (Plaintiff’s Ex. 17, Dkt.

No. 5); *McGraw-Hill Dictionary of Scientific and Technical Terms* at 1577 (3d ed. 1984) “subset” (Plaintiff’s Ex. 18, Dkt. No. 5).

Defendants respond: The claims recite processing “only a signal” of the subset or plurality of signals, which means that less than the entire subset or plurality is processed. Further, the Court in *Phase 2* correctly determined that a “subset” of signals does not encompass all the signals and Plaintiff is collaterally estopped from challenging this determination. Dkt. No. 151 at 31–32.

Analysis

The issue in dispute distills to whether a subset may encompass the entire set of which it is a subset. It may not. Further, the Court rejects Defendants’ proposed construction that limits the processing to less than all of the subset (Claim 11) or to less than the plurality of signals (Claims 16, 20).

The issue of whether a “subset of said plurality of signals” encompasses the entirety of the plurality of signals was squarely before the Court in *Phase 2*. The Court is not persuaded by Plaintiff’s arguments and evidence that the *Phase 2* ruling was incorrect thus the Court need not reach the issue of collateral estoppel. The Court reiterates the *Phase 2* ruling and reasoning and rejects Plaintiff’s argument that a subset may be coextensive with the set of which it is a subset.

See Memorandum Opinion and Order, Personalized Media Communications, LLC v. Apple, Inc. et al., No. 2:15-cv-01366-JRG-RSP (Lead Case), Dkt. No. 247 at 61–66 (E.D. Tex. Oct. 25, 2016).

The Court rejects Defendants’ attempt to limit these terms to necessarily process fewer signals than are in the subset (Claim 11) or in the plurality of signals (Claims 16, 20). The claim language is clear and does not carry the meaning Defendants suggest. The Court agrees that the terms state the processing of “only a signal … that includes an identifier that matches said predetermined identifier.” This does not, however, mandate that fewer signals than the entire subset or plurality

of signals are processed. That would be true only if the number of signals that include an identifier that matches said predetermined identifier is fewer than the number of signals in the subset or plurality. The term “only” in these terms does not suggest the claim scope that Defendants’ argue.

Accordingly, the Court construes “subset of said plurality of signals” as follows and holds the terms otherwise have their plain and ordinary meanings without the need for further construction.

- “subset of said plurality of signals” means “less than all of said plurality of signals.”

W. “processor”

Disputed Term	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“processor” <ul style="list-style-type: none">• ’217 Patent Claims 16, 20• ’344 Patent Claim 1• ’528 Patent Claims 21, 32	a device that performs operations according to instructions	No construction necessary. If a construction is necessary: “a device that processes data.”

The Parties’ Positions

Plaintiff submits: The Asserted Patents teach that a processor is not necessarily a fixed-function processor and the claims at issue are directed to instruction-executing processors. The Court should reconsider its *Phase 1* construction of “processor.” Dkt. No. 143 at 28.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: ’217 Patent col.8 ll.35–40, col.12 ll.34–41, col.86 ll.40–41; ’490 Patent col.5 ll.15–20.

Defendants respond: The term “processor” is a well-known term that encompasses fixed-function processors, as held in *Phase 1*. The claims at issue do not mandate a different construction. Dkt. No. 151 at 32–33.

In addition to the claims themselves, Defendants cite the following **intrinsic evidence** to support their position: ’490 Patent fig.2A, col.9 ll.27–40, col.19 l.42 – col.20 l.7.

Analysis

The issue in dispute is whether a processor is necessarily “a device that performs operations according to instructions.” It is not.

The issue of whether a “processor” in the Asserted Patents’ family is necessarily limited to “a device that performs operations according to instructions” was squarely before the Court in *Phase 1*. The Court is not persuaded by Plaintiff’s arguments and evidence that the *Phase 1* ruling was incorrect. Thus, the Court reiterates the *Phase 1* ruling and reasoning and rejects Plaintiff’s argument that a processor is necessarily “a device that performs operations according to instructions.” See Memorandum Opinion and Order, *Personalized Media Communications, LLC v. Apple, Inc. et al.*, No. 2:15-cv-01366-JRG-RSP (Lead Case), Dkt. No. 246 at 59–61 (E.D. Tex. Oct. 25, 2016).

Accordingly, the Court construes “processor” as follows:

- “processor” means “a device that processes data.”

X. “processor instructions”

Disputed Term	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“processor instructions” • ’217 Patent Claims 1, 11, 20	commands or signals that are executed by, or instruct, a processor to perform operations	no construction necessary

The Parties’ Positions

Plaintiff submits: As held by the Court in *Phase 2*, the disclosure of the Asserted Patents teaches that “processor instructions” are “commands or signals that are executed by, or instruct, a processor to perform operations.” Dkt. No. 143 at 29.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: ’217 Patent col.13 ll.2–7; ’490 Patent col.19 ll.42–44.

Defendants respond: Plaintiff's proposed construction improperly broadens "instructions" to include "signals" and signals cannot be "executed" or be "resident" on a computer, as required by the claims. Further, Plaintiff represented to the Patent Office that "processor instructions" is a well-understood term. Dkt. No. 151 at 32–33.

In addition to the claims themselves, Defendants cite the following **intrinsic evidence** to support their position: '490 Patent col.19 ll.59–67; Patent Owner's Response at 14, 17, *Amazon.com Inc. et al. v. Personalized Media Communications, LLC*, IPR2014-01534 (Patent No. 7,827,587²³) (PTAB June 29, 2015) (Defendants' Ex. 43, Dkt. No. 151-16 at 3, 6).

Analysis

The issue in dispute appears to be whether the term "processor instructions" encompasses "signals that are executed by, or instruct, a processor to perform operations." It does.

The substantially same issue was addressed by the Court in *Phase 2*. The Court is not persuaded by Defendants' argument and evidence that the *Phase 2* ruling was incorrect. Thus, the Court reiterates the *Phase 2* ruling and reasoning. *See Memorandum Opinion and Order, Personalized Media Communications, LLC v. Apple, Inc. et al.*, No. 2:15-cv-01366-JRG-RSP (Lead Case), Dkt. No. 247 at 11–13 (E.D. Tex. Oct. 25, 2016).

Accordingly, the Court construes "processor instructions" as follows:

- "processor instructions" means "commands or signals that are executed by, or instruct, a processor to perform operations."

²³ U.S. Patent No. 7,827,587 purports to be a continuation of U.S. Patent Application No. 08/113,329, the same application that all the Asserted Patents list as a continuation parent.

Y. “reprogramming said processor” and “operating instructions”

Disputed Term	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“reprogramming said processor” • ’344 Patent Claim 1	“reprogramming” means: implementing alternate operating instructions “processor” is construed elsewhere.	rewriting or revising processor instructions to change at least a portion of the operating system
“operating instructions” • ’344 Patent Claim 1	plain and ordinary meaning	software that controls the basic functionality of the processor by rewriting or revising the operating system itself

Because the parties’ arguments and proposed constructions with respect to these terms are related, the Court addresses the terms together.

The Parties’ Positions

Plaintiff submits: The term “reprogramming” refers to providing new instructions to a processor, which encompasses additions and alterations to an operating system but also to other operating instructions. As the Court held in *Motorola*, “operating instructions” are not limited to software that alters the operating system. For example, the Asserted Patents describe operating instructions preprogrammed in firmware. Dkt. No. 143 at 29–31.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: ’217 Patent col.17 ll.61–65, col.20 ll.40–45, col.20 l.66 – col.21 l.3, col.35 ll.63–66, col.186 l.18, col.262 ll.26–28, col.266 ll.16–18, col.285 ll.28–32; ’490 Patent col.5 ll.16–20.

Defendants respond: As Plaintiff represented to the Patent Office in reexamination of a related patent (the “’277 Patent”), the operating instructions and reprogramming of the Asserted Patents are directed to a processor’s operating system rather than to application software. Further, Claim

1 of the '344 Patent expressly requires the “first operating instructions” and “second operating instructions” of the claim to be other than “permanent operating instructions.” The Court did not consider this prosecution history in reaching its construction in *Motorola*. In *Scientific Atlanta*, the court relied on Plaintiff’s representation there that “reprogramming at least a portion of said system” in a related patent refers to “rewriting or revising at least a portion of the operating system.” As explained by Plaintiff in the reexamination, this is different than just adding software. This characteristic of “reprogram” was a basis for distinguishing prior art in the reexamination. Dkt. No. 151 at 33–36.

In addition to the claims themselves, Defendants cite the following **intrinsic evidence** to support their position: '217 Patent col.35 ll.63–66; '344 Patent File Wrapper March 16, 2010 Applicant Correspondence at 1 (Defendants’ Ex. 75, Dkt. No. 151-48 at 2), March 20, 2010 Applicant Correspondence at 1 (Defendants’ Ex. 54, Dkt. No. 151-27 at 2), April 14, 2010 Notice of Allowance (Defendants’ Ex. 55, Dkt. No. 151-28); U.S. Patent No. 5,335,277²⁴ File Wrapper²⁵ August 1, 2005 Amendment at 62–67 (Defendants’ Ex. 52, Dkt. No. 151-25 at 4–9), August 16, 2006 Appeal Brief at 69–71 (Defendants’ Ex. 53, Dkt. No. 151-26 at 4–6), March 19, 2010 Request for Rehearing at 14, 18 (Defendants’ Ex. 51, Dkt. No. 151-24 at 3, 7), September 27, 2010 Decision on Request for Rehearing at 5–6 (Defendants’ Ex. 56, Dkt. No. 151-29 at 4–5).

Plaintiff replies: The claims and issues addressed in reexamination of the '277 Patent and in *Scientific Atlanta* differ from the claim and issue before the Court here. Dkt. No. 153 at 10–11

Plaintiff cites further **intrinsic evidence** to support its position: U.S. Patent No. 5,335,277 File Wrapper August 1, 2005 Amendment at 62 (Defendants’ Ex. 52, Dkt. No. 151-25 at 4).

²⁴ U.S. Patent No. 5,335,277 purports to be related through continuation applications to the application that issued as U.S. Patent No. 4,965,825, which is also true for the Asserted Patents.

²⁵ The cited sections are from reexaminations no. 90/006,563 and 90/006,698.

Analysis

The issue in dispute distills to whether the “reprogramming” and “operating instructions” of the Asserted Patents are necessarily directed to modifying the operating system. In Claim 1 of the ’344 Patent, they are, in that the “operating instructions” are directed to the operating system and the claimed “reprogramming” is with “operating instructions.”

Plaintiff, as the patentee, represented to the Patent Office that the plain meaning of “operating instructions” in the common specification is “software that controls the basic functionality of the processor by rewriting or revising the operating system.” Specifically, Plaintiff represented that “[o]perating instructions are well known in the art to be software that controls the basic functionality of the processor by rewriting or revising the operating system itself.” U.S. Patent No. 5,335,277 File Wrapper March 19, 2010 Request for Rehearing in Reexamination Control Nos. 90/006,563 & 90/006,698, at 14 (citing *Microsoft Computer Dictionary* 521 (5th ed. 2002)), Dkt. No. 151-24 at 3. “As the operating system controls application software, instructions that merely install application software are outside the purview of” claims directed to operating instructions. *Id.* Regardless of whether the issues in reexamination were different than those before the Court, Plaintiff’s statement to the Patent Office regarding the customary meaning of “operating instructions” is relevant. Notably, Plaintiff represented this as the plain meaning of the term in a patent that shares the common specification of the Asserted Patents, meaning the term is used in the Asserted Patents according to its customary meaning. The term “operating instructions” was not redefined in the Asserted Patents else it would also have been redefined in the related patent under reexamination. In other words, “operating instructions” in the Asserted Patents has its customary meaning and that meaning has been set forth by Plaintiff in a related proceeding before the Patent Office.

Plaintiff's statements to the Patent Office regarding the meaning of "reprogram," taken in context, are not a clear statement of the customary meaning of the term, nor are they lexicography or disclaimer. In reexamination of the related patent, Plaintiff argued the meaning of the following claim clause: "digital signals including new operating instructions ... loading said operating instructions that are addressed to said processor into said memory device to thereby reprogram said processor." U.S. Patent No. 5,335,277 File Wrapper August 1, 2005 Amendment at 62, Dkt. No. 151-25 at 4. Plaintiff represented that the claim at issue is distinct over the prior art "because the references [d]o not disclose or suggest the claim elements leading up to and including the *rewriting/revision* of at least a portion of the operating system. None of the applied references teach downloading to reprogram an operating system, at best, they disclose downloading application software." *Id.* at 63 (emphasis added), Dkt. No. 151-25 at 5. One interpretation of this statement is that "reprogram" alone means to rewrite or revise at least a portion of the operating system. Another interpretation is that to "reprogram" with new operating instructions means to rewrite or revise at least a portion of the operating system. The Court understands the second interpretation to be the better interpretation of the prosecution history, especially in light of Plaintiff's clear and unmistakable representations regarding the customary meaning of "operating instructions." The second interpretation is at least as reasonable as the first. Thus, "reprogram" is not specially defined through lexicography or disclaimer. *3M Innovative Props. Co. v. Tredegar Corp.*, 725 F.3d 1315, 1326 (Fed. Cir. 2013) ("Where an applicant's statements are amenable to multiple reasonable interpretations, they cannot be deemed clear and unmistakable."). The plain meaning of "reprogramming," then, is simply programming anew, with alternate instructions.

Accordingly, the Court construes these terms as follows:

- “reprogramming said processor” means “providing alternate operating instructions”; and
- “operating instructions” means “software that controls the basic functionality of the processor by rewriting or revising the operating system itself.”

Z. “said receiver station having a data network connection to an external data network”

Disputed Term	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“said receiver station having a data network connection to an external data network”	the receiver station having a data network connection to a remote network	no construction necessary
• ’344 Patent Claim 1		

The Parties’ Positions

Plaintiff submits: This term requires “connection to a remote network, not just connection to a local network.” The Asserted Patents distinguish the external network from a local network and equate the connection to an external network with connection to a remote network. Dkt. No. 143 at 31–32.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: ’217 Patent figs.2, 2D, 3, 6A–6B, 7, 7B, 7C, col.177 ll.1–8, col.231 ll.28–38, col.285 ll.28–43; ’490 Patent figs.1, 3, 5, 6B, 6D–6G, col.11 ll.18–21, col.12 ll.55–57.

Defendants respond: An “external” network is not necessarily a “remote” network. Rather, it is simply external to the signal processor. Dkt. No. 151 at 36.

In addition to the claims themselves, Defendants cite the following **intrinsic evidence** to support their position: ’217 Patent figs.2, 2D, 3.

Analysis

The issue in dispute distills to whether an “external data network” is necessarily a “remote network.” The Court rejects Plaintiff’s proposed construction as Plaintiff has not met the exacting standard required to rewrite “external” as “remote.” The readily apparent plain meaning of “said receiver station having a data network connection to an external data network” is that the external data network is “external” to the receiver station. While the external data network may be a remote network, it is not necessarily a remote network (unless the meaning of “remote network,” which is not before the Court, so dictates).

Accordingly, the Court rejects Plaintiff’s proposed construction and determines that “said receiver station having a data network connection to an external network” has its plain and ordinary meaning without the need for further construction.

AA. “generating a query at said receiver station”

Disputed Term	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“generating a query at said receiver station” • ’344 Patent Claim 1	formulating, at said receiver station, a request for information	telephoning a remote site to get additional instructions

The Parties’ Positions

Plaintiff submits: The term “generating” here refers to producing new data or specifications, not to transmitting. The “transmitting” concept is expressed in the “promulgating said query … through said data network” claim language. Further, the transmission is not limited to telephonic transmission, as Defendants’ suggest. Dkt. No. 143 at 32–33.

In addition to the claims themselves, Plaintiff cites the following intrinsic and extrinsic evidence to support its position: **Intrinsic evidence:** ’217 Patent fig.7C, col.231 ll.24–26; ’490

Patent fig.5. **Extrinsic evidence:** *Webster's NewWorld Dictionary of Computer Terms* at 115 (1983), “generate” (Plaintiff’s Ex. 20, Dkt. No. 143-33 at 4).

Defendants respond: The only disclosure of generating a query in the Asserted Patents is telephoning a remote site to get additional instructions. During prosecution, Plaintiff identified this telephoning disclosure as the written description support for the claim language. Plaintiff’s proposed construction impermissibly expands the claim language “far beyond anything described in the specification.” Dkt. No. 151 at 36–37.

In addition to the claims themselves, Defendants cite the following **intrinsic evidence** to support their position: ’217 Patent fig.2, col.141 ll.46–50, col.231 ll.24–29; ’490 Patent fig.1, col.15 ll.20–25; ’344 Patent File Wrapper March 1, 2002 Amendment at 10 (Defendants’ Ex. 57, Dkt. No. 151-30 at 7); ’217 Patent File Wrapper January 21, 2006 Examiner’s Answer at 27 (Defendants’ Ex. 59, Dkt. No. 151-32 at 4); U.S. Patent No. 7,734,251²⁶ Patent File Wrapper March 20, 2009 Appeal Decision at 30 (Defendants’ Ex. 58, Dkt. No. 151-31 at 5).

Analysis

The issue in dispute distills to whether “generating a query at said receiver station” should be limited to the described telephonic-query embodiment. It should not. Defendants have not met the exacting standard to limit this term to a disclosed embodiment. Further, Plaintiff’s proposed construction does not clarify anything, given the context of the surrounding claim language, which recites “generating a query at said receiver station, said query comprising a request by said receiver station for reprogramming.” The plain meaning of the term, in context, is clear. The query includes

²⁶ U.S. Patent No. 7,734,251 purports to be a continuation of U.S. Patent Application No. 08/113,329, the same application that all the Asserted Patents list as a continuation parent.

a request for reprogramming and the meaning of “generating” is not more clearly expressed as “formulating.”

Accordingly, the Court rejects both Plaintiff’s and Defendants’ proposed constructions and determines that this term has its plain and ordinary meaning without the need for further construction.

BB. “determining the absence of complete generated television image data”

Disputed Term	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“determining the absence of complete generated television image data” • ’528 Patent Claims 21, 32	determining the absence of complete generated television programming image data; “television programming” construed elsewhere	“complete generated television image data” means “all of the data necessary to display an overlay of user-specific information and broadcast television communications”

The Parties’ Positions

Plaintiff submits: The “complete generated television image data” refers to a complete image from television programming and does not require “all the data necessary to display an overlay.” For example, the Asserted Patents associate “complete” image data with fully processed image data. Further, as the Court explained in *Phase 2* and *Motorola*, “television” of the Asserted Patents is not limited to broadcast television. Finally, as explained in *Phase 2*, at least a portion of the programming is designed for multiple recipients, thus the complete data is not necessarily user specific. Dkt. No. 143 at 33–34.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: ’217 Patent col.14 ll.1–5, col.64 ll.12–17, col.64 ll.26–41, col.233 ll.10–16, col.233 ll.28–34, col.233 ll.54–56.

Defendants respond: As described in the Asserted Patents, the invention of the '528 Patent's claims at issue here is directed to preventing display of "incomplete overlays." Dkt. No. 151 at 37–38.

In addition to the claims themselves, Defendants cite the following **intrinsic evidence** to support their position: '217 Patent col.14 ll.17–18, col.64 ll.12–41, col.233 ll.28–34.

Analysis

There are two issues in dispute. First, whether "television image data" is necessarily broadcast television. It is not. Second, whether "complete generated television image data" necessarily includes all the information to display an overlay of user-specific information. It does not.

The "television image data" does not necessarily include "broadcast television communications." Even if "television image data" were limited to "conventional" television technology at the time of the invention, the Asserted Patents clearly contemplate cablecast television. *See, e.g.*, col.15 ll.49–52 ("FIG. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input."), col.167 ll.59–62 ("FIG. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.").

The "complete generated television image data" does not necessarily include "all of the data necessary to display an overlay of user-specific information and ... television communications." Even if the "only relevant passage in the specification that concerns the distinction between 'complete' and 'incomplete' data relates to the overlay data," this alone is not enough to limit the claims to that discussion. See *Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005) (en

banc) (“In particular, we have expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment.”); *see also, Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1366 (Fed. Cir. 2012) (“It is likewise not enough that the only embodiments, or all of the embodiments, contain a particular limitation. We do not read limitations from the specification into claims; we do not redefine words. Only the patentee can do that.”). Further, the claims themselves do not mandate an overlay. For instance, Claim 21 of the ’528 Patent recites: “A method of controlling the display of television programming at a receiver station … receiving an information transmission including a television signal … determining the absence of complete generated television image data by processing information at least one of included in and received with said television signal.” There is no mention of “overlay,” unlike the portion of the specification relied upon by Defendants, which specifies “incomplete overlays” rather than incomplete television image data. *See ’217 Patent col.233 ll.28–34.* Further, Claim 28, which ultimately depends from Claim 21, recites “said complete television image is a video overlay.” This suggests that a television image, and television image data, is not necessarily an overlay. Simply, Defendants fail to meet the exacting standard to establish lexicography or disclaimer that limits “complete generated television image data” to necessarily include overlay data.

Accordingly, the Court construes the term as follows:

- “determining the absence of complete generated television image data” means “determining the absence of complete generated television programming image data.”

CC. “advancing to the subsequent information received in said information transmission”

Disputed Term	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“advancing to the subsequent information received in said information transmission” • ’528 Patent Claim 21	plain and ordinary meaning.	moving to later instructions received in or with a television signal

The Parties’ Positions

Plaintiff submits: As described in the Asserted Patents, the claimed “advancing” in the “information transmission” simply means moving to a later part of the transmission. It is not limited to skipping to a later point in television programming. For example, the patents teach skipping instructions and jumping ahead to subsequent instructions. Dkt. No. 143 at 34.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: ’217 Patent col.234 ll.16–36, col.264 l.29 – col.265 l.11.

Defendants respond: While the “advancing” may involve moving or skipping to later instructions, the instructions are received as part of a television signal. Dkt. No. 151 at 38.

In addition to the claims themselves, Defendants cite the following **intrinsic evidence** to support their position: ’217 Patent col.8 ll.19–40, col.39 ll.51–52, col.73 ll.49–52, col.235 ll.10–15, col.235 ll.28–33.

Analysis

It appears the issue in dispute is whether “subsequent information” is necessarily “later instructions.” It is not.

The meaning of the claim language is apparent without construction, and does not limit “subsequent information” to either instructions or television programming. This is clear from the surrounding language in Claim 21 of the ’528 Patent, which recites:

receiving an information transmission including a television signal;
passing at least a portion of said information transmission to said processor;
determining the absence of complete generated television image data by
processing information at least one of included in and received with said
television signal;
determining a location of subsequent information for advancing to based on
said step of determining the absence of complete generated television image
data; [and]
advancing to the subsequent information received in said information
transmission.

As recited in the claims, the “information” is not limited to television signals or television programming or instructions. Further, Claim 22, which depends from Claim 21, recites “said subsequent information is received in said information transmission” and the only content constraint on “information transmission” is that it include a “television signal.” *See also*, Claim 24 (“detecting said subsequent information in said information transmission”). Ultimately, the Court is not persuaded that the “subsequent information” necessarily is or includes instructions.

Accordingly, the Court rejects Defendants’ proposed construction and determines that this term has its plain and ordinary meaning without the need for further construction.

V. CONCLUSION

The Court adopts the constructions set forth above, as summarized in the following table. The Court further finds that Claim 12 of the ’920 Patent is invalid as indefinite. The parties are **ORDERED** that they may not refer, directly or indirectly, to each other’s claim-construction positions in the presence of the jury. Likewise, the parties are **ORDERED** to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the Court, in the presence of the jury. Any reference to claim-construction proceedings is limited to informing the jury of the definitions adopted by the Court.

The parties are hereby **ORDERED** to file a Joint Notice within fourteen (14) days of the issuance of this Memorandum Opinion and Order indicating whether the case should be referred

for mediation. If the Parties disagree about whether mediation is appropriate, the Parties should set forth a brief statement of their competing positions in the Joint Notice.

Section	Term	Construction
A	“programming,” as a noun <ul style="list-style-type: none">• ’344 Patent Claim 1• ’920 Patent Claims 7, 12• ’528 Patent Claims 21, 32• ’241 Patent Claims 16, 22, 30• ’560 Patent Claims 4, 5	“everything that is transmitted electronically to entertain, instruct, or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming, at least a portion designed for multiple recipients”
	“programming,” as a verb <ul style="list-style-type: none">• ’560 Patent Claim 8	“providing operating instructions”
B	“television … programming” <ul style="list-style-type: none">• ’344 Patent Claim 1	“video and any corresponding audio content, at least a portion designed for multiple recipients, that is transmitted electronically”
	“television programming” <ul style="list-style-type: none">• ’528 Patent Claims 21, 32• ’241 Patent Claims 16, 22, 30	“video and any corresponding audio content, at least a portion designed for multiple recipients, that is transmitted electronically”
	“television program” <ul style="list-style-type: none">• ’217 Patent Claims 12, 18, 21	“video and any corresponding audio content, at least a portion designed for multiple recipients, that is transmitted electronically”
C	“audio or video programming” <ul style="list-style-type: none">• ’920 Patent Claims 7, 12	plain and ordinary meaning, subject to the construction of “programming”
D	“units of programming” <ul style="list-style-type: none">• ’920 Patent Claims 7, 17• ’560 Patent Claim 5	plain and ordinary meaning, subject to the construction of “programming”
	“units of audio or video programming” <ul style="list-style-type: none">• ’920 Patent Claims 7, 12	plain and ordinary meaning, subject to the construction of “programming”

Section	Term	Construction
E	“video” <ul style="list-style-type: none">• ’217 Patent Claims 12, 18, 20• ’344 Patent Claim 1• ’920 Patent Claims 7, 12• ’241 Patent Claim 36	“visual presentation that is capable of showing change or movement”
	“video image[s]” <ul style="list-style-type: none">• ’217 Patent Claims 20, 36	plain and ordinary meaning, subject to construction of “video”
F	“programming origination stations” <ul style="list-style-type: none">• ’920 Patent Claims 7, 12’560 Patent Claims 4, 5	plain and ordinary meaning
	“origination station” ’241 Patent Claims 16, 22, 30	plain and ordinary meaning
	“intermediate transmitter station” <ul style="list-style-type: none">• ’217 Patent Claim 3’241 Patent Claims 16, 22, 30	plain and ordinary meaning
	“intermediate transmission station” <ul style="list-style-type: none">• ’920 Patent Claims 7, 12• ’560 Patent Claims 4, 5	“station that can receive and retransmit broadcast transmissions”
G	“transmitter station” <ul style="list-style-type: none">• ’217 Patent Claims 2, 16• ’528 Patent Claim 32	plain and ordinary meaning
H	“automatically controlling the operation of said intermediate transmitter station” <ul style="list-style-type: none">• ’241 Patent Claim 16	“controlling the operations of said intermediate transmitter station without subscriber input”
I	“said identified storage locations are different for each of said plurality of units of audio or video programming” <ul style="list-style-type: none">• ’920 Patent Claim 7	plain and ordinary meaning

Section	Term	Construction
	“said identified storage locations are different for each of said units of audio or video programming” • ‘920 Patent Claim 12	indefinite
J	“control signal” • ‘217 Patent Claim 20 • ‘528 Patent Claim 32 • ‘241 Patent Claims 16, 22, 30 • ‘560 Patent Claims 4, 5	plain and ordinary meaning
K	“identification information” • ‘241 Patent Claims 22, 30	plain and ordinary meaning
L	“how and where to search for signals” • ‘241 Patent Claim 16	plain and ordinary meaning
	“controlling the operation and identification of signals by controlling how and where to search for signals” • ‘241 Patent Claim 16	plain and ordinary meaning
M	“media” • ‘217 Patent Claims 1, 11, 16	“channels of communication, such as radio, television, newspaper, book, or Internet”
	“medium” • ‘217 Patent Claims 1, 11, 16, 20	“channel of communication, such as radio, television, newspaper, book, or Internet”
N	“create a series of discrete video images” • ‘217 Patent Claim 20	“bring into existence a series of discrete video images and not simply select or retrieve the series of discrete video images”
O	“generate information based on said second medium” • ‘217 Patent Claims 11, 16	“bring into existence information based on said second medium and not simply select or retrieve the information”

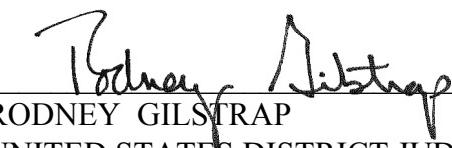
Section	Term	Construction
P	“coordinating” • '217 Patent Claim 1	plain and ordinary meaning
	“coordinate” • '217 Patent Claim 11	plain and ordinary meaning
	“coordinated” • '217 Patent Claim 16	plain and ordinary meaning
	“combining” • '217 Patent Claim 20	plain and ordinary meaning
Q	“coordinated presentation” • '217 Patent Claim 16	“presentation of elements placed or arranged in proper position relative to each other in time, location, fashion of playing, or manner of presentation based on a defined relationship between the content of the presentation elements”
R	“outputting and displaying said multimedia presentation” • '217 Patent Claims 1, 11, 16	plain and ordinary meaning
S	“content of said medium comprising an identifier that matches said predetermined identifier explains a significance of said presentation” • '217 Patent Claim 1	plain and ordinary meaning
	“content of said first medium explains a significance of said information” • '217 Patent Claim 11	plain and ordinary meaning
	“information included in said first medium explaining a significance of said generated information” • '217 Patent Claim 16	plain and ordinary meaning

Section	Term	Construction
T	“medium explaining a significance of said video image” • ’217 Patent Claim 20	plain and ordinary meaning
	“explains a significance” • ’217 Patent Claims 1, 11	plain and ordinary meaning
	“explaining a significance” • ’217 Patent Claims 16, 20	plain and ordinary meaning
T	“content” • ’217 Patent Claims 1, 11, 16, 20	“the substance or gist, in contrast to form or structure”
	“determining content” • ’217 Patent Claim 1	“ascertaining or recognizing the content, and not simply determining the type of medium”
	“identifies said content” • ’217 Patent Claim 1	“ascertains or recognizes said content, and not simply identifies the type of medium”
	“identifies content” • ’217 Patent Claim 11	“ascertains or recognizes content, and not simply identifies the type of medium”
	“identify content” • ’217 Patent Claim 11	“ascertain or recognize content, and not simply identify the type of medium”
	“identifying said content” • ’217 Patent Claim 11	“ascertaining or recognizing said content, and not simply identifying the type of medium”
	“identifying, using a processor, content” • ’217 Patent Claims 16, 20	“ascertaining or recognizing content, using a processor, and not simply identifying the type of medium”
	“identifying content” • ’217 Patent Claims 16, 20	“ascertaining or recognizing content and not simply identifying the type of medium”
	“digital data channel” • ’217 Patent Claims 1, 11, 16, 22	“channel that carries digital information”

Section	Term	Construction
V	subset of said plurality of signals • '217 Patent Claim 11	“less than all of said plurality of signals”
	process only a signal of said subset of said plurality of signals that includes an identifier that matches said predetermined identifier to provide said first medium • '217 Patent Claim 11	plain and ordinary meaning, subject to construction of “subset of said plurality of signals”
	processing only a signal of said plurality of signal that includes an identifier that matches said predetermined identifier to provide said first medium • '217 Patent Claim 16, 20	plain and ordinary meaning
W	“processor” • '217 Patent Claims 16, 20 • '344 Patent Claim 1 • '528 Patent Claims 21, 32	“a device that processes data”
X	“processor instructions” • '217 Patent Claims 1, 11, 20	“commands or signals that are executed by, or instruct, a processor to perform operations”
Y	“reprogramming said processor” • '344 Patent Claim 1	“providing alternate operating instructions”
	“operating instructions” • '344 Patent Claim 1	“software that controls the basic functionality of the processor by rewriting or revising the operating system itself”
Z	“said receiver station having a data network connection to an external data network” • '344 Patent Claim 1	plain and ordinary meaning
AA	“generating a query at said receiver station” • '344 Patent Claim 1	plain and ordinary meaning

Section	Term	Construction
BB	“determining the absence of complete generated television image data” • ’528 Patent Claims 21, 32	“determining the absence of complete generated television programming image data”
CC	“advancing to the subsequent information received in said information transmission” • ’528 Patent Claim 21	plain and ordinary meaning
AGREED	“control signals for controlling the operation ... of the intermediate transmitter station” • ’241 Patent Claim 16	no construction necessary
	“storage location[s]” • ’920 Patent Claim 7 • ’560 Patent Claim 5	no construction necessary
	“storage device[s]” • ’920 Patent Claims 8, 9, 12	no construction necessary
	“predetermined transmission station capacities” • ’920 Patent Claim 7	no construction necessary
	“data of predetermined capacities” • ’920 Patent Claim 12	no construction necessary
	“transmitting said television programming and said second signal from said intermediate transmitter station to said receiver station” • ’241 Patent Claims 22, 30	no construction necessary
	preamble of ’344 Patent Claim 1	limiting
	preamble of each asserted claim of the ’528 Patent	limiting

So ORDERED and SIGNED this 3rd day of April, 2020.



RODNEY GILSTRAP
UNITED STATES DISTRICT JUDGE